



QUARTERLY GROUNDWATER MONITORING REPORT

Fourth Quarter 2005 (Fourteenth Quarterly)

Sampled on December 18, 2005

Job # SP-160

LOP # 12341

Big Oil & Tire - McKinleyville BP (McKinleyville 76)

2698 Central Avenue

McKinleyville, California 95519

February 22, 2006

This *Quarterly Groundwater Monitoring Report* was prepared by SounPacific Environmental Services (SounPacific) staff for Big Oil and Tire Co. (BO&T), using previous studies that were conducted by Clearwater Group, Inc. (CGI), SounPacific, and file review conducted at Humboldt County Department of Health and Human Services: Division of Environmental Health (HCDEH). The site (the Site) is located at 2698 Central Avenue in McKinleyville, California (Figure 1).

SITE DESCRIPTION

The station is positioned on the northwest corner at the intersection of Central Avenue and Reaser Road (Figure 1), approximately 1.5 miles north of downtown McKinleyville. Site improvements include a single story building and two dispensers. The structure is approximately 800 square feet in size and is positioned near the western property line facing east towards Central Avenue. The site is surfaced around the current structure with concrete and asphalt. There is currently one (1) 15,000-gallon split compartment UST containing regular gasoline and premium gasoline,

positioned approximately 17 feet from the southern property line. A mixer located at the dispensers creates mid-grade gasoline. Sewer and water services are supplied by public utilities. Drainage ditches and municipal storm sewers control surface water runoff. All electrical and telephone lines are above ground (Figure 2).

SITE TOPOGRAPHY AND LAND USE

Site topography is relatively flat. The site elevation is approximately 114 feet above mean sea level (amsl). Regional topography consists of rolling terrain that gently slopes to the west toward the Pacific Ocean (Figure 1). The Site is located approximately 1.5 miles east of the Pacific Ocean. According to USGS maps, the Site is located approximately 1,000 feet south of Norton Creek and 1,000 feet north of Widow White Creek.

This site is located on the uplifted Savage Creek Marine Terrace, which dates at roughly 83,000 years before present. The Savage Creek Marine Terrace deposits consist mainly of sand, with minor amounts of silt, clay, and gravel. These sediments were deposited on wave-cut benches that have since become exposed through tectonic uplift and changes in sea level. These marine terrace deposits are typically up to a few tens of feet thick and are late Pleistocene in age (Carver and Burke, 1992).

SounPacific understands that the property is owned by BO&T of Arcata, California. The main structure is used as a retail gas station for the retail dispensing of three (3) grades of unleaded gasoline from the USTs on site. A mini-mart that is combined with a cashiers' office is located inside the main structure.

The surrounding land use in the immediate vicinity is a mixture of commercial and residential. Properties to the immediate north and south of the site are commercial with residential properties located to the east and west of the Site. This site is bordered on the south by Reasor Road and to the east by Central Avenue. An apartment complex is located adjacent to the west of the property.

SITE HISTORY

1991 Waste Oil UST Cleaning (Sessions)

On March 1, 1991, Sessions Tank Liners, Inc. (Sessions) exposed the top of the 550-gallon waste oil tank and cleaned the interior by steam cleaning. HCDEH observed the procedure and noted that gasoline and waste oil constituent contamination were visible in the soils surrounding the waste oil tank.

1991 Waste Oil UST Removal (Beacom)

On December 12, 1996, a waste oil UST was removed by Beacom Construction (Beacom) from the Site. From the tank excavation, a soil sample and a groundwater sample were collected for laboratory analysis. Analysis of both the soil and groundwater samples reported the presence of petroleum hydrocarbons in both the gasoline and motor oil range, along with elevated levels of the BTXE compounds. The laboratory results for the soil and groundwater samples are summarized in Tables 1 and 2, respectively.

1997 Product Line Test (Beacom)

During pressure testing of the product lines at the site in January 1997, a leak was identified. The product line was exposed by Beacom and a leak was detected at a plumbing fitting near the south end of the eastern pump island. Mr. Brent Whitner of HCDEH observed the excavation and noted apparent gasoline product in the soil near the line. Mr. Whitner's notes indicated that five (5) to 10 gallons of gasoline were recovered from the excavation during the repair process.

1997 Subsurface Investigation (CGI)

On March 25, 1997, Clearwater Group, Inc., (CGI) performed a subsurface investigation at the site, which consisted of drilling eight soil borings (B-1 through B-5, and MW-1 through MW-3, Figure 3). Two (2) inch groundwater monitoring wells were installed in the three soil borings, MW-1 to MW-3. Laboratory analytical reported the high levels of soil contamination being in borings B-5

and MW-3, adjacent to the fuel islands (Table 1).

2000 Subsurface Investigation (SounPacific)

On October 25, 2000, SounPacific staff performed a subsurface investigation at the Site in accordance with a CGI approved work plan, of October 20, 1998. The investigation consisted of drilling nine soil borings (B-6 through B-14, Figure 3). Soil samples from depths of five (5) and ten feet below ground surface (bgs) were analyzed from each boring. Laboratory analysis of these samples did not identify any significant soil contamination. Total petroleum hydrocarbons and MTBE were identified in grab groundwater samples from borings B-9 and B-12 (Table 2). Boring B-9 is on the eastern margin of the Site and boring B-12 is to the southwest of the Site. SounPacific recommended further delineation to the west of boring B-9 and south southwest of boring B-12. HCDEH concurred with this recommendation in a correspondence dated March 1, 2001.

2002 Subsurface Investigation (SounPacific)

Further subsurface investigation was conducted at the site in April and June of 2002. In April 2002, SounPacific hand augered three soil borings (B-15 through B-17) on the property, to the west of the site (Figure 3). These borings were used for the procurement of groundwater samples only, in order to assist in the delineation of the groundwater contamination. Laboratory analysis of the groundwater samples, reported petroleum hydrocarbons in the sample from location B-17 (Table 2).

On June 17, 2002, further investigation was conducted that consisted of drilling one soil boring (B-18) to the southwest of the property on Reasor Road, and the drilling and installation of three, two (2) inch diameter groundwater monitoring wells (MW-4 to MW-6). Soil and a grab groundwater samples were collected from boring B-18, along with one soil sample from boring MW-4 and two soil samples from soil boring MW-5. Elevated concentrations of TPHg, TPHd, BTXE, and MTBE were reported in both soil samples from boring location MW-5 (Table 1). The monitoring wells were incorporated into a groundwater monitoring program (Table 4).

2003 UST Installation (Beacom)

On October 6, 2003, Beacom conducted a subsurface geotechnical investigation that included the collection of soil and groundwater samples, to evaluate soil conditions related to the installation of a new UST system. One soil sample (McK 76-2) and one groundwater sample (McK 76-1) were collected and analyzed for TPHg and TPHd (Figure 3). Groundwater was determined to be impacted with both TPHg and TPHd (Table 2).

On October 28-29, 2003, Beacom conducted further site evaluation activities by excavating a UST pit and product line trenches for the installation two new dual-walled 15,000-gallon split compartmented gasoline USTs, associated product lines, and dispenser system. The soil that was removed during these activities was combined with the preliminary test pit soil. Sixteen soil samples (MCK 76 SP1 through MCK 76 SP16) were collected from this stockpile and analyzed to ensure that the soil could be used as fill for the future UST removal. The number of soil samples was at the direct request of HCDEH staff, and was to ensure that only clean soil was placed back in the excavation. Based on the analytical results it was determined that the stockpiled soil could be used onsite for backfilling purposes. In addition to the stockpile soil samples, a water sample was collected from the tank test pit. Laboratory analysis reported the presence of elevated levels of TPHg and MTBE, with low levels of benzene, xylenes, and ethylbenzene. The results of the groundwater analysis are summarized in Table 2.

The new UST system was installed in the southern portion of the property during November 2003. The new tank system was installed prior to the old USTs being removed, allowing the service station to remain in business during the construction activities.

2003 Excavation & Soil Removal (SounPacific)

On December 22, 2003, Beacom removed the three former gasoline USTs. Following the removal of the USTs, SounPacific staff collected samples for Photo Ionization Detector (PID) analysis while continuing excavation activities to remove the contaminated soil, in accordance with the approved work plan. The objective was to remove as much of the contaminated soil as possible.

During the course of activities, monitoring well MW-5 was destroyed. All investigative work was performed in accordance with the approved SounPacific *Excavation Workplan*, dated November 26, 2003.

As excavation activity progressed, a PID was continuously used to monitor soil excavation tailings and sidewalls as described in the approved work plan. Five soil samples (DI-1 through DI-5) were collected from the sidewalls at five (5) locations in order to verify the limits of excavation and PID reading accuracy. The locations of these samples are shown in Figure 3, with the analytical results presented in Table 2. Groundwater from the excavation pit was pumped out to collect any floating product that may be present and to remove as much contaminated groundwater as practical. The removed water was stored on-site in a portable storage tank. A water sample (McK 76 WT17) from the water tank was collected and analyzed to determine hydrocarbon concentrations. Laboratory analysis of the water sample reported significantly elevated levels of all petroleum hydrocarbons (Table 2). The collected water (1,350-gallons) was subsequently removed and disposed of by Chico Drain Oil.

The excavated soil was stockpiled onsite in an area separated from the soil that was removed during the test pit excavation and UST system installation. The proposed excavation did not completely remove all the in-situ contaminated soil due to a lack of onsite storage space for the excavated soil and heavy rain conditions. The excavation was backfilled with the stockpiled soil from the earlier UST installation that had been deemed suitable for onsite use based on the results of laboratory analytical and the leachability studies. The stockpiled contaminated soil was removed from the Site by Beacom on February 9-11, 2004 and transported to Bio Industries in Red Bluff, California for disposal.

2004 Subsurface Investigation (SounPacific)

The December 2003 excavation did not remove all the contaminated soil, therefore during the period between September 23 through 27, 2004, SounPacific conducted further site characterization to delineate the extent of the remaining soil contamination. Twelve borings (B-19 through B-30) were drilled and soil samples were collected for analysis. The boring locations were

to the north, east, and west of the December 2003 remedial excavation, as shown in Figure 3. The thirty-six soil samples from the twelve borings were analyzed for TPHg, BTXE, and five (5) fuel oxygenates.

Boring B-19 was located to the east of the original soil excavation pit. While located in an area of suspected soil contamination, further excavation in the direction of B-19 would not be possible due to the presences of the site's office building. Hydrocarbon contamination concentrations, in B-19 were relatively low, and therefore it was determined that no further remedial action was required in this area.

Three borings (B-23 through B-25) were drilled to the north of the Site of the former USTs (Figure 3). Laboratory analytical results of the nine samples collected from the three borings to the north, only reported TPHg in one sample (1.3 ppm in sample SB-24 @ 4'). BTXE compounds were commonly non-detect, and if present were less than 0.015 ppm. The highest MTBE concentration was 0.17 ppm. It was therefore concluded that no further remedial excavation would be required north of the former UST area.

The remaining eight borings were located to the east of original excavation. Three borings (B-20 through B-22) were located along a north south axis directly east of the edge of the original excavation. Laboratory analytical results of these three borings indicated the highest levels of hydrocarbon contamination concentrations at four (4) feet bgs with TPHg at concentrations of 1,800 ppm (B-20) 3,600 ppm (B-21) and 570 ppm (B-22). In all three borings, hydrocarbon contamination concentrations decrease dramatically with depth, with the maximum TPHg concentration at 10 feet bgs being 5.9 ppm. With the exception of the four (4) feet bgs samples in B-20 and B-21, the levels of the BTEX compounds were generally low. The highest concentration of MTBE (6.6 ppm) was reported in B-20 at four feet bgs. The next three step-out borings (B-26 through B-28) were located approximately 10 feet further east than the initial borings in this area, and the final two borings (B-29 and B-30) were located a further 10 feet to the east. As step-out borings proceeded to the east, hydrocarbon contaminations continued to decrease both in the easterly direction and with depth. However, TPHg concentrations in soil still exceed 250 ppm in the shallow samples (Table 1).

2004 Soil Excavation (Beacom)

The September 2004 investigation delineated the extent of contaminated soil that remained and required remedial action. On December 1, 2004, the excavation of the remaining known contaminated soil commenced. The objective of the soil excavation was to remove the accessible contaminated soil that had TPHg level in excess of 100 ppm based on laboratory results. To monitor contaminant levels and to ensure only contaminated soil was removed, the removed soil and the excavation sidewalls were continuously screened using a PID as the excavation progressed. Based upon previous experience, it was determined that a PID screening level of 300 ppm would meet the required clean-up standard.

The excavation was initiated on December 1, 2004 in an area of confirmed contamination, and continued until December 3, 2004, when clean-up objectives had been achieved in all accessible areas. However, in two general locations it was not possible to meet this objective due to the hazard of compromising structural integrities. These areas were the dispenser island west of the excavated pit and the drainage ditch along Central Ave.

At the completion of the removal activities, an area of approximately 50 feet by 35 feet and to a depth of between eight (8) and eleven feet bgs had been excavated. Based on field screening data, and the limited available space onsite, the soil was generally loaded directly on trucks for transportation and disposal. A total of 672 tons of petroleum contaminated soil was removed from the Site and disposed of at Bio Industries in Red Bluff, California.

RESULTS OF QUARTERLY SAMPLING

Groundwater monitoring at the Site commenced in June 2002. During the initial year, monthly water level readings were collected with quarterly groundwater sampling events. Since June 2003, water level readings and groundwater sampling has been conducted on a quarterly basis, and is currently scheduled to continue until further notice. Quarterly water level data is used to determine

the groundwater gradient and flow direction, and quarterly sampling events monitor the concentration and fluctuation of hydrocarbon contamination levels present in the groundwater beneath the Site. This report documents the results of the monitoring wells gauging and sampling conducted on December 18, 2005.

FIELD DATA

Wells gauged: MW-1, 2, 3, 4, and 6 (MW-5 destroyed in December 2003)

Groundwater: Depth ranged from 2.06 feet to 3.68 feet below top of casing (Table 3)
Elevation ranged from 111.53 to 111.75 feet above mean sea level (Table 3)

Floating product/Sheen: Sheen detected in MW-4 and 6

GW flow direction: Southwest (Figure 4)

GW Gradient: 0.002 feet per foot (Figure 4)

On December 18, 2005, the depth to groundwater in the Site's five monitoring wells ranged from 2.06 feet below top of casing (btoc) in well MW-2 to 3.68 feet btoc in well MW-4. When corrected to mean sea level, water level elevations ranged from 111.53 feet above mean sea level (amsl) to in well MW-1 to 111.75 feet amsl in well MW-2. Groundwater levels for the December 18, 2005, monitoring event, along with historical level and elevations are included in Table 3. Groundwater flow was towards the southwest at a gradient of 0.002 feet per foot. The groundwater flow and gradient are graphically depicted in Figure 4. Prior to sampling, all wells were purged; the groundwater field parameters for each well are presented below.

MONITORING WELL MW-1 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
2:08 pm	0	6.23	59.20	0.537
2:13	1.5	5.70	61.22	0.531
2:18	3	6.13	61.46	0.507
2:21	4.5	6.23	61.33	0.513

MONITORING WELL MW-2 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
3:05 pm	0	6.98	56.71	0.219
3:09	1.7	7.10	61.78	0.207
3:13	3.4	7.18	61.85	0.186
3:19	5.1	7.19	62.00	0.173

MONITORING WELL MW-3 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
4:08 pm	0	6.86	53.75	0.024
4:11	1.3	6.80	57.90	0.089
4:15	2.6	6.83	58.20	0.282
4:19	3.9	6.91	58.73	0.374

MONITORING WELL MW-4 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
3:39 pm	0	6.58	55.75	0.148
3:44	1.4	6.60	57.87	0.147
3:47	2.8	6.55	58.84	0.148
3:53	4.2	6.49	58.61	0.152

MONITORING WELL MW-6 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
2:36 pm	0	6.33	57.32	0.288
2:41	1.5	6.43	58.40	0.291
2:46	3	6.58	59.42	0.332
2:51	4.5	6.54	59.96	0.329

ANALYTICAL RESULTS

Sampling locations: MW-1, 2, 3, 4, and 6

Analyses performed: TPHg, BTXE, MTBE, DIPE, TAME, ETBE, TBA, TPHd, TPHmo

Laboratories used: Basic Laboratory, Inc., Redding, California (Cert No. 1677)

The analytical results for the current monitoring event are presented on the next page and graphically depicted in Figure 5. The laboratory report is included as Appendix A. The historical analytical results for all monitoring wells, since the implementation of groundwater monitoring are included as Table 4.

	<u>MW-1</u> (ppb)	<u>MW-2</u> (ppb)	<u>MW-3</u> (ppb)	<u>MW-4</u> (ppb)	<u>MW-6</u> (ppb)
TPHg:	13,900	278	4,080	ND < 50	4,890
Benzene:	ND < 100	12.7	129	ND < 0.5	731
Toluene:	ND < 100	0.9	16.6	ND < 0.5	ND < 25.0
Xylenes:	ND < 200	4.6	17.7	ND < 1.0	ND < 50.0
Ethylbenzene:	ND < 100	4.1	94.1	ND < 0.5	ND < 25.0
MTBE:	22,500	55.3	386	ND < 1.0	6,360
DIPE:	ND < 100	ND < 0.5	ND < 2.0	ND < 0.5	ND < 25.0
TAME:	ND < 100	2.4	29.9	ND < 0.5	194
ETBE:	ND < 100	ND < 0.5	ND < 2.0	ND < 0.5	ND < 25.0
TBA:	ND < 10,000	ND < 50.0	ND < 200	ND < 50.0	ND < 2,500
TPHd:	188	101	2,500	ND < 50	259
TPHmo:	201	92	322	110	140

COMMENTS AND RECOMMENDATIONS

On December 18, 2005, the 14th *Quarterly Groundwater Monitoring Event* for the five onsite monitoring wells was conducted at the McKinleyville 76, which is located at 2698 Central Avenue in McKinleyville, California. A summary of the results are presented below.

- The depth to groundwater in the five onsite wells ranged between 2.06 feet btoc (MW-2) to 3.68 feet btoc (MW-4). Groundwater flow was towards the southwest at a gradient of 0.002 feet per foot.
- Groundwater samples from the five onsite wells were collected and analyzed for TPHg, BTXE, five (5) oxygenates, TPHd, and TPHmo. Laboratory results reported TPHg in four

wells at concentrations that ranged from 278 ppb (MW-2) to 13,900 ppb (MW-1). Benzene was reported in three wells at concentrations that ranged from 12.7 ppb (MW-2) to 731 ppb (MW-6). Toluene, xylenes, and ethylbenzene were reported in wells MW-2 and MW-3, with toluene concentrations of 0.9 ppb (MW-2) and 16.6 (MW-3), xylenes concentrations of 4.6 ppb (MW-2) and 17.7 ppb (MW-3), and ethylbenzene concentrations of 4.1 ppb (MW-2) and 94.1 ppb (MW-3). MTBE was reported in all wells except MW-4, at concentrations that ranged from 55.3 ppb (MW-3) to 22,500 ppb (MW-1). TAME was reported in three wells at concentrations that ranged from 2.4 ppb (MW-2) to 194 ppb (MW-6). TPHd was reported in four wells at concentrations that ranged from 101 ppb (MW-2) to 2,500 ppb (MW-3). TPHmo was reported in all wells, at concentrations that ranged from 92 ppb (MW-2) to 322 ppb (MW-3).

Based upon these results the following observations and conclusions have been made.

- TPHg has been reported consistently in all wells except MW-4, since the initial monitoring event. Concentrations are generally very high, with levels in MW-1, MW-3, and MW-6 fluctuating with levels ranging from 10^3 to 10^4 ppb. TPHg concentrations have decreased in all wells since the last quarter (Figures 6, 7, 8, and 10).
- BTXE has consistently been reported in all wells except MW-1 and MW-4, during most of the sampling events. BTXE has been reported in MW-1 with less consistency, however its absences is likely due to the elevated reporting limits. Concentrations are high and fluctuating with benzene being the most frequently reported constituent. The BTEX concentrations appear to be decreasing in all wells (Figures 6, 7, 8, and 10).
- MTBE was reported in wells MW-1, MW-3, and MW-6 at concentrations ranging from 10^2 to 10^4 ppb during every sampling event since the inception of the monitoring program. MTBE was reported in well MW-2 during all but one sampling event at varying concentrations. MTBE was reported in MW-4 at concentrations less than five (5) ppb during the initial sampling events, but has not been reported since the 2nd Quarter 2003 sampling event (Figures 6, 7, 8, 9, and 10).

- TAME was reported in MW-1 during different sampling events at varying concentrations. TAME had not been reported in MW-2 until the last three (3) monitoring events, when it has been reported at low concentrations. TAME was reported in well MW-3 during every sampling event thus far, however, the concentrations have generally been decreasing. TAME has not been reported in MW-4 since the *1st Quarter 2003* sampling event and has been reported in MW-6 during different sampling events at varying concentrations.
- DIPE and ETBE have not been reported since the inception of the monitoring program.
- TBA has appeared infrequently in wells MW-1, MW-3, and MW-6. TBA has never been reported in wells MW-2 and MW-4.
- TPHd has been reported during most sampling events at high and fluctuating concentrations in all wells except MW-4. In MW-4, TPHd has only been reported three times since the inception of the monitoring events. TPHd concentrations have been reported at their highest concentrations in well MW-3. Overall, TPHd concentrations in all wells are generally decreasing (Figures 6, 7, 8, 9, and 10).
- TPHmo has been reported in all wells at various times since the inception of the monitoring. The highest concentrations of TPHd have been reported in wells MW-1, MW-3, and MW-6.

Based on the results of the December 2005 monitoring event and other historical results, the following future activities are proposed.

- Groundwater monitoring will be continued until further notice. Groundwater level measurements will be collected from the five onsite monitoring wells to determine groundwater flow direction and gradient. Collected groundwater samples will be analyzed for TPHg, BTXE, five (5) fuel oxygenates, TPHd, and TPHmo.

- SounPacific is currently working with adjacent property owners to obtain access to implement the approved *Site Investigation Work Plan*, which includes the installation of additional downgradient borings, an offsite downgradient monitoring well, and a monitoring well to replace the destroyed well MW-5. The work will be implemented as soon as an access agreement is in-place. SounPacific will make recommendations for future work in the *Report of Findings* that follows this investigation.

CERTIFICATION

This report was prepared under the direct supervision of a California registered geologist at SounPacific. All information provided in this report including statements, conclusions and recommendations are based solely upon field observations and analyses performed by a state-certified laboratory. SounPacific is not responsible for laboratory errors.

SounPacific promises to perform all its work in a manner that is currently used by members in similar professions working in the same geographic area. SounPacific will do what ever is reasonable to ensure that data collection is accurate. Please note however, that rain, buried utilities, and other factors can influence groundwater depths, directions and other factors beyond what SounPacific could reasonably determine.

SounPacific

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ATTACHMENTS

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APPENDICES

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Tables & Chart

Table 1
Soil Analytical Results
McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)	Total Lead (ppm)	TOG (ppm)	Cr (ppm)	Zn (ppm)
McK-1	Waste Oil UST	12/12/1995	5,600	7.3	15	550	78	-----	-----	-----	-----	-----	ND < 10	1,900	23	2,900	65	25
B-1 @ 3.5'	B-1	3/25/1997	36	0.018	0.18	1.32	0.21	ND < 0.10	-----	-----	-----	-----	1.7	14	2.8	-----	-----	-----
B-2 @ 3.5'	B-2	3/25/1997	1.7	0.021	ND < 0.02	.022	0.025	ND < 0.05	-----	-----	-----	-----	ND < 10	170	3.3	-----	-----	-----
B-3 @ 3.5'	B-3	3/25/1997	3	0.012	ND < 0.03	ND < 1.0	ND < 0.05	ND < 0.05	-----	-----	-----	-----	ND < 10	240	16	-----	-----	-----
B-4 @ 3.5'	B-4	3/25/1997	110	0.21	ND < 0.50	0.63	0.75	ND < 0.25	-----	-----	-----	-----	32	210	52	-----	-----	-----
B-5 @ 3.5'	B-5	3/25/1997	8,400	72	340	580	100	ND < 50	-----	-----	-----	-----	830	23	8.8	-----	-----	-----
MW-1 @ 3.5'	MW-1	3/25/1997	ND < 1.0	0.0072	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	2.8	-----	-----	-----
MW-2 @ 3.0'	MW-2	3/25/1997	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	5.3	-----	-----	-----
MW-3 @ 4.5'	MW-3	3/25/1997	360	0.14	ND < 0.005	1.9	1.4	ND < 0.05	-----	-----	-----	-----	11	28	6.5	-----	-----	-----
B-6 @ 5'	B-6	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-6 @ 10'	B-6	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-7 @ 5'	B-7	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	7.3	19	-----	-----	-----	-----
B-7 @ 10'	B-7	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-8 @ 5'	B-8	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-8 @ 10'	B-8	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-9 @ 5'	B-9	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-9 @ 10'	B-9	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	0.24	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-10 @ 5'	B-10	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-10 @ 10'	B-10	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-11 @ 5'	B-11	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-11 @ 11'	B-11	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-12 @ 5'	B-12	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-12 @ 10'	B-12	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-13 @ 5'	B-13	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-13 @ 10'	B-13	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-14 @ 5'	B-14	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
B-14 @ 10'	B-14	10/25/2000	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	-----	-----	-----	-----	ND < 1.0	ND < 10	-----	-----	-----	-----
SB-18 @ 4'	B-18	6/17/2002	ND < 0.06	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 10	ND < 10	-----	-----	-----	-----
SB-18 @ 8'	B-18	6/17/2002	ND < 0.06	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 10	ND < 10	-----	-----	-----	-----
MW-4 @ 8'	MW-4	6/17/2002	ND < 0.06	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 5	ND < 10	25.4	-----	-----	-----	-----
MW-5 @ 4'	MW-5	6/17/2002	150	1.47	11.3	15.3	4.7	ND < 1	ND < 1	ND < 1	ND < 1	ND < 1000	107	ND < 10	-----	-----	-----	-----
MW-5 @ 8'	MW-5	6/17/2002	59.3	ND < 1	5.12	9.92	1.89	7.61	ND < 1	ND < 1	ND < 1	ND < 1000	121	ND < 10	-----	-----	-----	-----

Notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

TPHd: Total petroleum hydrocarbons as diesel.

TPHmo: Total petroleum hydrocarbons as motor oil.

TOG: Total oil & grease

Cr: Chromium

Zn: Zinc

ppm: parts per million = µg/g = mg/kg = 1000 µg/kg

ND: Not detected. Results were reported below the method detection limit as shown.

Table 1 (cont.)
Soil Analytical Results
 McKinleyville 76
 2698 Central Avenue
 McKinleyville, California 95519

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	Total Lead (ppm)
McK 76-2	Test Pit	10/6/2003	ND < 1.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	ND < 1.0	-----
DI-1	Sidewall	12/22/2003	3,500	40	410	680	110	31	ND < 5.0	15	ND < 5.0	ND < 50	-----	110
DI-2	Sidewall	12/22/2003	15,000	84	340	1,300	200	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	-----	14
DI-3	Sidewall	12/22/2003	490	1.5	1.7	3.3	2.0	ND < 0.1	ND < 0.1	ND < 0.1	ND < 0.1	ND < 1.0	-----	27
DI-4	Sidewall	12/22/2003	430	1.0	2.5	4.0	7.8	0.25	ND < 0.25	ND < 0.25	ND < 0.25	ND < 2.5	-----	16
DI-5	Sidewall	12/22/2003	2,700	20	96	270	55	2.6	ND < 2.5	ND < 2.5	ND < 2.5	ND < 25	-----	6.7
SB-19 @ 4'	B-19	9/23/2004	1.9	0.15	0.011	0.039	0.039	0.51	ND < 0.006	ND < 0.006	ND < 0.006	0.14	----	----
SB-19 @ 8'	B-19	9/23/2004	ND < 70	3.6	3.7	2.41	ND < 0.70	6.2	ND < 0.70	ND < 0.70	ND < 0.70	ND < 7.0	----	----
SB-19 @ 10'	B-19	9/23/2004	2.4	0.20	0.047	0.071	0.041	1.6	ND < 0.005	0.16	ND < 0.005	0.94	----	----
SB-20 @ 4'	B-20	9/22/2004	1,800	15	86	154	33	6.6	ND < 0.59	ND < 0.59	ND < 0.59	ND < 5.9	----	----
SB-20 @ 8'	B-20	9/22/2004	5.3	0.11	0.19	0.58	0.14	0.12	ND < 0.006	ND < 0.006	ND < 0.006	ND < 0.06	----	----
SB-20 @ 10'	B-20	9/22/2004	5.9	0.046	0.19	0.45	0.11	0.051	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	----	----
SB-21 @ 4'	B-21	9/22/2004	3,600	25	210	348	72	2.5	ND < 0.58	ND < 0.58	ND < 0.58	ND < 5.8	----	----
SB-21 @ 8'	B-21	9/22/2004	800	0.71	5.2	74	21	ND < 0.51	ND < 0.51	ND < 0.51	ND < 0.51	ND < 5.1	----	----
SB-21 @ 10'	B-21	9/22/2004	2.6	0.042	0.12	0.312	0.11	0.11	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	----	----
SB-22 @ 4'	B-22	9/22/2004	570	ND < 0.60	1.7	49.4	11	ND < 0.60	ND < 0.60	ND < 0.60	ND < 0.60	ND < 6.0	----	----
SB-22 @ 8'	B-22	9/22/2004	32	ND < 0.005	0.044	1.80	0.41	0.007	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	----	----
SB-22 @ 10'	B-22	9/22/2004	2.2	ND < 0.006	0.008	0.194	0.045	0.009	ND < 0.006	ND < 0.006	ND < 0.006	ND < 0.06	----	----
TE-1NP	Ust Pit	12/11/2003	70	ND < 0.25	0.39	ND < 0.5	0.66	0.66	ND < 0.25	ND < 0.25	ND < 0.25	ND < 2.5	----	----
TE-2NM	Ust Pit	12/11/2003	2,500	ND < 2.5	16	63.5	26	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 25	----	8.7
TE-3NR	Ust Pit	12/11/2003	6,900	ND < 2.5	ND < 2.5	41	35	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 25	----	----
TE-4SR	Ust Pit	12/11/2003	9,200	2.5	6,300	238	67	0.007	ND < 2.5	ND < 2.5	ND < 2.5	ND < 25	----	----
TEPW-5	Ust Pit	12/12/2003	4,400,000	800	120,000	3,170	780	3,200	ND < 500	ND < 500	ND < 500	ND < 5,000	----	----

Notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

TPHd: Total petroleum hydrocarbons as diesel.

TPHmo: Total petroleum hydrocarbons as motor oil.

ppm: parts per million = µg/g = mg/kg = 1000 µg/kg

ND: Not detected. Results were reported below the method detection limit as shown.

Table 1 (cont.)
Soil Analytical Results
McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)
SB-23 @ 4'	B-23	9/22/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.006	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-23 @ 8'	B-23	9/22/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-23 @ 10'	B-23	9/22/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-24 @ 4'	B-24	9/22/2004	1.3	0.015	ND < 0.005	ND < 0.015	0.005	0.084	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-24 @ 8'	B-24	9/22/2004	ND < 1.0	ND < 0.006	ND < 0.006	ND < 0.018	ND < 0.006	ND < 0.006	ND < 0.006	ND < 0.006	ND < 0.006	ND < 0.06
SB-24 @ 10'	B-24	9/22/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-25 @ 4'	B-25	9/23/2004	ND < 1.0	0.009	ND < 0.006	ND < 0.018	ND < 0.006	0.17	ND < 0.006	ND < 0.006	ND < 0.006	ND < 0.06
SB-25 @ 8'	B-25	9/23/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.014	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-25 @ 10'	B-25	9/23/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-26 @ 4'	B-26	9/23/2004	1,700	1.1	2.7	77	19	ND < 0.61	ND < 0.61	ND < 0.61	ND < 0.61	ND < 6.1
SB-26 @ 8'	B-26	9/23/2004	5.1	0.041	0.010	0.294	0.13	0.028	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-26 @ 10'	B-26	9/23/2004	ND < 1.0	ND < 0.005	ND < 0.005	0.031	0.009	0.061	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-27 @ 4'	B-27	9/23/2004	1,700	ND < 0.63	ND < 0.63	33.4	14	ND < 0.63	ND < 0.63	ND < 0.63	ND < 0.63	ND < 6.3
SB-27 @ 8'	B-27	9/23/2004	ND < 1.0	ND < 0.005	ND < 0.005	0.016	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-27 @ 10'	B-27	9/23/2004	1.6	ND < 0.005	ND < 0.005	0.097	0.019	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-28 @ 4'	B-28	9/23/2004	80	ND < 0.14	ND < 0.14	ND < 0.41	ND < 0.14	ND < 0.14	ND < 0.14	ND < 0.14	ND < 0.14	ND < 1.4
SB-28 @ 8'	B-28	9/23/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-28 @ 10'	B-28	9/23/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-29 @ 4'	B-29	9/27/2004	290	ND < 0.60	ND < 0.60	5.5	2.6	ND < 0.60	ND < 0.60	ND < 0.60	ND < 0.60	ND < 6.0
SB-29 @ 8'	B-29	9/27/2004	1.6	0.007	ND < 0.005	0.047	0.026	0.028	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-29 @ 10'	B-29	9/27/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	0.025	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-30 @ 4'	B-30	9/27/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-30 @ 8'	B-30	9/27/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05
SB-30 @ 10'	B-30	9/27/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05

Notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

ppm: parts per million = µg/g = mg/kg = 1000 µg/kg

ND: Not detected. Results were reported below the method detection limit as shown.

Table 1 (cont.)
Soil Analytical Results
 McKinleyville 76
 2698 Central Avenue
 McKinleyville, California 95519

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)
15T @ 4'	15T	12/1/2004	5,280	ND < 20	264	299	53.4	ND < 20	ND < 20	ND < 20	ND < 20	ND < 200	316	30
16T @ 4'	16T	12/1/2004	3,790	ND < 20	248	152	26.9	ND < 20	ND < 20	ND < 20	ND < 20	ND < 200	198	34
17T @ 4'	17T	12/1/2004	4,270	ND < 20	162	334	60.1	ND < 20	ND < 20	ND < 20	ND < 20	ND < 200	241	36
18T @ 4'	18T	12/1/2004	842	ND < 25	36.8	135	26.6	12	ND < 25	ND < 25	ND < 25	ND < 250	128	ND < 20
1B @ 8'	1B	12/2/2004	5,100	20.1	231	452	84.6	22.6	ND < 20	ND < 20	ND < 20	ND < 200	357	ND < 40
2B @ 8'	2B	12/2/2004	3,140	ND < 12.5	119	291	52.6	15.2	ND < 12.5	ND < 12.5	ND < 12.5	ND < 125	164	22
3B @ 8'	3B	12/2/2004	0.106	ND < 0.005	0.021	ND < 0.015	ND < 0.005	0.006	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 15	ND < 15
4B @ 8'	4B	12/2/2004	21.4	1.14	2.04	ND 0.015	ND < 0.005	2.07	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 10	ND < 10
5B @ 11'	5B	12/3/2004	246	ND < 8	4.26	17.9	3.05	ND < 8	ND < 8	ND < 8	ND < 8	ND < 80	42	ND < 20
6B @ 11'	6B	12/3/2004	ND < 0.06	ND < 0.005	0.014	ND < 0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 10	ND < 10
7SW @ 5'	7SW	12/2/2004	4,430	56.8	355	618	119	75.2	ND < 25	ND < 25	ND < 25	ND < 250	393	ND < 40
Mck76SW8 @ 7'	8SW	12/2/2004	ND < 1.0	0.055	0.013	0.016	0.012	ND < 0.025	ND < 0.020	ND < 0.020	ND < 0.020	ND < 0.50	1.2	ND < 10
9SW @ 5'	9SW	12/2/2004	1,400	ND < 5	ND < 5	66.2	18.2	ND < 5	ND < 5	ND < 5	ND < 5	ND < 50	31	ND < 20
10SW @ 5'	10SW	12/3/2004	4.17	ND < 0.025	ND < 0.025	ND < 0.075	ND < 0.025	ND < 0.025	ND < 0.025	ND < 0.025	ND < 0.025	ND < 0.25	ND < 10	13
11SW @ 8'	11SW	12/3/2004	ND < 0.06	ND < 0.005	ND < 0.005	0.015	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 10	ND < 10
Mck76SW12 @ 8'	12SW	12/3/2004	ND < 1.0	ND < 0.005	0.02	0.086	0.024	ND < 0.025	ND < 0.020	ND < 0.020	ND < 0.020	ND < 0.50	1.3	ND < 10
13SW @ 7'	13SW	12/3/2004	1,860	ND < 6.66	21.1	121	22.4	ND < 6.66	ND < 6.66	ND < 6.66	ND < 6.66	ND < 66.6	61	ND < 20
14SW @ 5'	14SW	12/3/2004	6,170	156	1,380	ND < 150	ND < 50	93.6	ND < 50	ND < 50	ND < 50	ND < 500	1,750	ND < 200

Notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

TPHd: Total petroleum hydrocarbons as diesel.

TPHmo: Total petroleum hydrocarbons as motor oil.

ppm: parts per million = µg/g = mg/kg = 1000 µg/kg

ND: Not detected. Results were reported below the method detection limit as shown.

Table 2
Groundwater Analytical Results from Borings
McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Sample ID	Sample Location	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)	TOG (ppb)	Total Lead (ppb)	Cr (ppb)	Zn (ppb)
McK-2	Waste Oil UST	12/12/1996	32,000	2,400	270	5,000,000	2,400	----	----	----	----	----	ND < 10	31,000	0.064	500	150	160
B-6	B-6	10/25/2000	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 3.0	----	----	----	----	ND < 50	ND < 170	----	----	----	----
B-7	B-7	10/25/2000	ND < 50	0.52	ND < 0.5	ND < 0.5	ND < 0.5	ND < 3.0	----	----	----	----	ND < 50	ND < 170	----	----	----	----
B-8	B-8	10/25/2000	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 3.0	----	----	----	----	ND < 50	ND < 170	----	----	----	----
B-9	B-9	10/25/2000	4,000	180	ND < 3.0	ND < 2.0	ND < 2.0	3,200	----	----	----	----	52	ND < 170	----	----	----	----
B-10	B-10	10/25/2000	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 3.0	----	----	----	----	ND < 50	ND < 170	----	----	----	----
B-11	B-11	10/25/2000	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	9.4	----	----	----	----	ND < 50	ND < 170	----	----	----	----
B-12	B-12	10/25/2000	270	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	400	----	----	----	----	ND < 50	ND < 170	----	----	----	----
B-13	B-13	10/25/2000	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	11	----	----	----	----	ND < 50	ND < 170	----	----	----	----
B-14	B-14	10/25/2000	ND < 50	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 3.0	----	----	----	----	ND < 50	ND < 170	----	----	----	----
B-15	B-15	4/24/2002	ND < 50	ND < 0.3	6.4	ND < 0.6	ND < 0.3	ND < 2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----	----	----
B-16	B-16	4/24/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----	----	----
B-17	B-17	4/24/2002	70	ND < 0.3	4.6	ND < 0.6	ND < 0.3	39.4	ND < 0.5	18.1	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----	----	----
SBGW-18 @ 6.1'	B-18	6/17/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	9.9	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----	----	----
McK 76-1	Test pit	10/6/2003	29,000	----	----	----	----	----	----	----	----	----	2,200	----	----	----	----	----
MCK 76 WT17	Water Tank	10/29/2003	160	1.3	ND < 0.5	3.7	2.2	270	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	ND < 50	----	----	----	----	----
PIT H2O	Excavated Pit	12/3/2004	15,000,000	61,000	1,500,000	2,060,000	330,000	1,900,000	ND < 10,000	48,000	ND < 10,000	ND < 100,000	25,000	3,100	----	----	----	----

Notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

TPHd: Total petroleum hydrocarbons as diesel.

TPHmo: Total petroleum hydrocarbons as motor oil.

TOG: Total oil & grease

Cr: Chromium

Zn: Zinc

ppb: parts per billion = µg/l = .001 mg/l = 0.001 ppm.

ND: Not detected. Results were reported below the method detection limit as shown.

Table 3
Water Levels
 McKinleyville 76
 2698 Central Avenue
 McKinleyville, California 95519

Sample Location	Date	Depth to Bottom/ Feet BToC	Survey Height/ Feet AMSL	Depth to Water/ Feet BToC	Adjusted Elevation/ Feet AMSL
MW-1	6/25/2002	12.52	114.23	5.39	108.84
	7/25/2002	12.51	114.23	6.21	108.02
	8/14/2002	12.51	114.23	6.56	107.67
	9/16/2002	12.49	114.23	6.92	107.31
	10/21/2002	12.53	114.23	7.26	106.97
	11/21/2002	11.26	114.23	6.54	107.69
	12/21/2002	12.48	114.23	2.01	112.22
	1/22/2003	11.54	114.23	2.88	111.35
	2/26/2003	12.51	114.23	2.90	111.33
	3/28/2003	12.51	114.23	2.28	111.95
	4/28/2003	12.51	114.23	1.70	112.53
	5/28/2003	12.51	114.23	3.99	110.24
	6/27/2003	12.63	114.23	5.10	109.13
	9/25/2003	12.63	114.23	6.59	107.64
	12/29/2003	12.63	114.23	1.22	113.01
	3/30/2004	12.63	114.23	2.80	111.43
	6/28/2004	12.60	114.23	5.68	108.55
	9/30/2004	12.60	114.23	7.06	107.17
	12/20/2004	12.55	114.23	3.41	110.82
	4/5/2005	12.55	114.23	2.23	112.00
	6/22/2005	12.51	114.23	2.90	111.33
	9/30/2005	12.51	114.23	6.21	108.02
	12/18/2005	12.50	114.23	2.70	111.53
MW-2	6/25/2002	13.41	113.81	4.75	109.06
	7/25/2002	13.43	113.81	5.62	108.19
	8/14/2002	13.42	113.81	6.02	107.79
	9/16/2002	13.42	113.81	6.38	107.43
	10/21/2002	13.39	113.81	6.71	107.10
	11/21/2002	12.54	113.81	6.08	107.73
	12/21/2002	13.49	113.81	1.42	112.39
	1/22/2003	12.71	113.81	2.50	111.31
	2/26/2003	13.24	113.81	2.35	111.46
	3/28/2003	13.24	113.81	1.76	112.05
	4/28/2003	13.24	113.81	1.27	112.54
	5/28/2003	13.24	113.81	3.44	110.37
	6/27/2003	13.57	113.81	4.50	109.31
	9/25/2003	13.57	113.81	6.02	107.79
	12/29/2003	NT	113.81	NT	NT
	3/30/2004	13.57	113.81	2.09	111.72
	6/28/2004	13.37	113.81	5.06	108.75
	9/30/2004	13.20	113.81	6.49	107.32
	12/20/2004	13.15	113.81	2.61	111.20
	4/5/2005	12.97	113.81	1.64	112.17
	6/22/2005	13.05	113.81	2.25	111.56
	9/30/2005	12.82	113.81	5.57	108.24
	12/18/2005	12.66	113.81	2.06	111.75

Table 3 (cont.)
Water Levels
 McKinleyville 76
 2698 Central Avenue
 McKinleyville, California 95519

Sample Location	Date	Depth to Bottom/ Feet BToC	Survey Height/ Feet AMSL	Depth to Water/ Feet BToC	Adjusted Elevation/ Feet AMSL
MW-3	6/25/2002	11.28	114.78	5.81	108.97
	7/25/2002	13.22	114.78	7.64	107.14
	8/14/2002	13.24	114.78	7.48	107.30
	9/16/2002	13.26	114.78	7.39	107.39
	10/21/2002	11.24	114.78	7.76	107.02
	11/21/2002	13.31	114.78	5.45	109.33
	12/21/2002	11.18	114.78	2.33	112.45
	1/22/2003	13.52	114.78	1.95	112.83
	2/26/2003	11.31	114.78	3.27	111.51
	3/28/2003	11.31	114.78	2.59	112.19
	4/28/2003	11.31	114.78	2.05	112.73
	5/28/2003	11.31	114.78	4.42	110.36
	6/27/2003	11.33	114.78	5.51	109.27
	9/25/2003	11.33	114.78	7.03	107.75
	12/29/2003	11.33	114.78	1.50	113.28
	3/30/2004	11.33	114.78	3.18	111.60
	6/28/2004	11.30	114.78	6.09	108.69
	9/30/2004	11.25	114.78	7.55	107.23
	12/20/2004	11.26	114.78	3.56	111.22
	4/5/2005	11.21	114.78	2.54	112.24
	6/22/2005	11.21	114.78	3.22	111.56
	9/30/2005	11.20	114.78	6.61	108.17
	12/18/2005	11.15	114.78	3.04	111.74
MW-4	6/25/2002	12.34	115.18	6.31	108.87
	7/25/2002	12.32	115.18	7.10	108.08
	8/14/2002	12.32	115.18	7.52	107.66
	9/16/2002	12.31	115.18	7.85	107.33
	10/21/2002	12.31	115.18	8.21	106.97
	11/21/2002	12.32	115.18	7.05	108.13
	12/21/2002	12.22	115.18	2.69	112.49
	1/22/2003	12.57	115.18	3.27	111.91
	2/26/2003	12.29	115.18	3.71	111.47
	3/28/2003	12.29	115.18	3.02	112.16
	4/28/2003	12.29	115.18	2.41	112.77
	5/28/2003	12.29	115.18	4.88	110.30
	6/27/2003	12.38	115.18	5.99	109.19
	9/25/2003	12.38	115.18	7.50	107.68
	12/29/2003	12.38	115.18	1.78	113.40
	3/30/2004	12.38	115.18	3.60	111.58
	6/28/2004	12.33	115.18	6.59	108.59
	9/30/2004	12.25	115.18	8.00	107.18
	12/20/2004	12.23	115.18	4.24	110.94
	4/5/2005	12.20	115.18	2.95	112.23
	6/22/2005	12.20	115.18	3.70	111.48
	9/30/2005	12.21	115.18	7.11	108.07
	12/18/2005	12.18	115.18	3.68	111.50

Table 3 (cont.)
Water Levels
 McKinleyville 76
 2698 Central Avenue
 McKinleyville, California 95519

Sample Location	Date	Depth to Bottom/ Feet BToC	Survey Height/ Feet AMSL	Depth to Water/ Feet BToC	Adjusted Elevation/ Feet AMSL
MW-5	6/25/2002	12.42	114.47	5.48	108.99
	7/25/2002	12.39	114.47	6.35	108.12
	8/14/2002	12.39	114.47	7.12	107.35
	9/16/2002	12.40	114.47	7.12	107.35
	10/21/2002	12.41	114.47	7.49	106.98
	11/21/2002	12.43	114.47	6.36	108.11
	12/21/2002	12.36	114.47	2.11	112.36
	1/22/2003	12.41	114.47	2.59	111.88
	2/26/2003	12.45	114.47	3.00	111.47
	3/28/2003	12.45	114.47	2.36	112.11
	4/28/2003	12.45	114.47	1.84	112.63
	5/28/2003	12.45	114.47	4.11	110.36
	6/27/2003	12.57	114.47	5.21	109.26
	9/25/2003	12.57	114.47	6.71	107.76
MW-6	6/25/2002	12.31	114.70	5.86	108.84
	7/25/2002	12.26	114.70	6.65	108.05
	8/14/2002	12.27	114.70	6.97	107.73
	9/16/2002	12.27	114.70	7.40	107.30
	10/21/2002	12.26	114.70	7.74	106.96
	11/21/2002	12.23	114.70	6.58	108.12
	12/21/2002	12.16	114.70	2.39	112.31
	1/22/2003	12.44	114.70	2.87	111.83
	2/26/2003	12.21	114.70	3.29	111.41
	3/28/2003	12.21	114.70	2.68	112.02
	4/28/2003	12.21	114.70	2.07	112.63
	5/28/2003	12.21	114.70	4.45	110.25
	6/27/2003	12.36	114.70	5.56	109.14
	9/25/2003	12.36	114.70	7.05	107.65
	12/29/2003	12.36	114.70	1.54	113.16
	3/30/2004	12.36	114.70	3.22	111.48
	6/28/2004	12.27	114.70	6.13	108.57
	9/30/2004	12.23	114.70	7.54	107.16
	12/20/2004	12.21	114.70	3.86	110.84
	4/5/2005	12.19	114.70	2.62	112.08
	6/22/2005	12.20	114.70	3.33	111.37
	9/30/2005	12.22	114.70	6.67	108.03
	12/18/2005	12.28	114.70	3.09	111.61

Notes:

AMSL: Above mean sea level

BtoC: Below top of casing

Table 4
Groundwater Analytical Results from Monitoring Wells
 McKinleyville 76
 2698 Central Avenue
 McKinleyville, California 95519

Sample Location	Sample Event	Annual Quarter	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
MW-1	Well Installation	Second Quarter	6/25/2002	23,000	230	ND < 0.3	1.4	0.7	45,400	ND < 0.5	58	ND < 0.5	ND < 100	676	600
	First Quarterly	Third Quarter	9/16/2002	30,600	89.4	ND < 0.3	1.3	1.3	130,000	ND < 0.5	43.4	ND < 0.5	ND < 100	722	ND < 50
	Second Quarterly	Fourth Quarter	12/21/2002	ND < 50	ND < 50	ND < 50	ND < 100	ND < 50	7,600	ND < 50	ND < 50	ND < 50	ND < 500	ND < 50	ND < 500
	Third Quarterly	First Quarter	3/28/2003	4,200	1,200	ND < 50	ND < 100	ND < 50	33,000	ND < 50	ND < 50	ND < 50	ND < 500	440	ND < 500
	Fourth Quarterly	Second Quarter	6/27/2003	37,000	4,000	ND < 500	ND < 1,000	ND < 500	81,000	ND < 500	ND < 500	ND < 500	ND < 5,000	120	ND < 500
	Fifth Quarterly	Third Quarter	9/25/2003	ND < 40,000	23,000	ND < 500	ND < 1,000	ND < 500	72,000	ND < 500	ND < 500	ND < 500	ND < 5,000	900	ND < 500
	Sixth Quarterly	Fourth Quarter	12/29/2003	2,800	ND < 500	ND < 500	ND < 1,000	ND < 500	31,000	ND < 500	ND < 500	ND < 500	ND < 5,000	120	ND < 500
	Seventh Quarterly	First Quarter	3/30/2004	29,000	ND < 50	ND < 50	ND < 100	ND < 50	65,000	ND < 50	150	ND < 50	23,000	750	ND < 500
	Eighth Quarterly	Second Quarter	6/28/2004	44,000	2,100	ND < 50	ND < 100	ND < 50	100,000	ND < 50	130	ND < 50	ND < 500	870	ND < 500
	Ninth Quarterly	Third Quarter	9/30/2004	24,000	670	ND < 50	ND < 150	ND < 50	50,000	ND < 50	61	ND < 50	ND < 500	370	ND < 500
	Tenth Quarterly	Fourth Quarter	12/20/2004	ND < 2,000	ND < 20.0	ND < 20.0	ND < 40.0	ND < 20.0	2,080	ND < 20.0	ND < 200	ND < 200	ND < 2,000	103	122
	Eleventh Quarterly	First Quarter	4/5/2005	6,810	ND < 12.5	ND < 12.5	ND < 25.0	ND < 12.5	8,110	ND < 12.5	31.8	ND < 12.5	ND < 1,250	74	106
	Twelfth Quarterly	Second Quarter	6/22/2005	11,000	ND < 50	ND < 50	ND < 100	ND < 50	15,700	ND < 50	ND < 50	ND < 50	ND < 5,000	159	189
	Thirteenth Quarterly	Third Quarter	9/30/2005	21,200	ND < 50.0	ND < 50.0	ND < 100	ND < 50.0	24,000	ND < 50.0	79.0	ND < 50.0	ND < 5,000	114	70
	Fourteenth Quarterly	Fourth Quarter	12/18/2005	13,900	ND < 100	ND < 100	ND < 200	ND < 100	22,500	ND < 100	ND < 100	ND < 100	ND < 10,000	188	201
MW-2	Well Installation	Second Quarter	6/25/2002	4,650	255	108	1,010	289	108	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	883	596
	First Quarterly	Third Quarter	9/16/2002	886	91.4	23.5	162	15.4	17.1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	382	ND < 50
	Second Quarterly	Fourth Quarter	12/21/2002	220	12	3.6	11.3	0.6	ND < 0.5	ND < 50	ND < 0.5	ND < 0.5	ND < 5.0	85	ND < 500
	Third Quarterly	First Quarter	3/28/2003	92	12	1.1	1.2	ND < 0.5	4.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarterly	Second Quarter	6/27/2003	1,700	190	36	189.7	100	16	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	330	ND < 500
	Fifth Quarterly	Third Quarter	9/25/2003	850	46	ND < 5.0	12	ND < 5.0	10	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	320	ND < 500
	Sixth Quarterly	Fourth Quarter	12/29/2003	----	----	----	----	----	----	----	----	----	----	----	----
	Seventh Quarterly	First Quarter	3/30/2004	140	14	0.5	0.8	ND < 0.5	12	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	110	ND < 500
	Eighth Quarterly	Second Quarter	6/28/2004	2,900	100	22	252	52	71	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	750	ND < 500
	Ninth Quarterly	Third Quarter	9/30/2004	790	29	ND < 5.0	25	ND < 5.0	26	ND < 5	ND < 5	ND < 5	ND < 50	170	ND < 500
	Tenth Quarterly	Fourth Quarter	12/20/2004	2,990	91.4	89.1	394	178	615	ND < 4.0	ND < 40.0	ND < 40.0	ND < 400	642	ND < 50
	Eleventh Quarterly	First Quarter	4/5/2005	337	7.7	ND < 0.5	ND < 1.0	ND < 0.5	27.6	ND < 0.5	1.2	ND < 0.5	ND < 50	ND < 50	55
	Twelfth Quarterly	Second Quarter	6/22/2005	518	32.8	0.8	1.7	ND < 0.5	129	ND < 0.5	5.3	ND < 0.5	ND < 50	85	ND < 50
	Thirteenth Quarterly	Third Quarter	9/30/2005	1,020	39.0	3.3	22.4	7.6	117	ND < 0.5	5.3	ND < 0.5	ND < 50.0	333	ND < 50
	Fourteenth Quarterly	Fourth Quarter	12/18/2005	278	12.7	0.9	4.6	4.1	55.3	ND < 0.5	2.4	ND < 0.5	ND < 50.0	101	92

Table 4 (cont.)
Groundwater Analytical Results from Monitoring Wells
McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Sample Location	Sample Event	Annual Quarter	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
MW-3	Well Installation	Second Quarter	6/25/2002	11,600	1,530	84.6	126	520	7,320	ND < 0.5	720	ND < 0.5	ND < 100	2,420	597
	First Quarterly	Third Quarter	9/16/2002	9,210	1,140	93.4	77	405	5,160	ND < 0.5	578	ND < 0.5	ND < 100	3500	ND < 50
	Second Quarterly	Fourth Quarter	12/21/2002	24,000	1,200	180	1,337	960	12,000	ND < 50	750	ND < 50	ND < 500	1300	ND < 500
	Third Quarterly	First Quarter	3/28/2003	7,800	860	ND < 50	ND < 100	88	6,100	ND < 50	410	ND < 50	ND < 500	4,000	ND < 500
	Fourth Quarterly	Second Quarter	6/27/2003	12,000	750	ND < 50	ND < 100	190	3,100	ND < 50	190	ND < 50	ND < 500	5,100	ND < 500
	Fifth Quarterly	Third Quarter	9/25/2003	17,000	1,200	79	54	330	2,100	ND < 50	280	ND < 50	ND < 500	7,200	ND < 500
	Sixth Quarterly	Fourth Quarter	12/29/2003	17,000	1,700	120	170	1,200	6,000	ND < 50	540	ND < 50	2,700	ND < 50	ND < 500
	Seventh Quarterly	First Quarter	3/30/2004	15,000	810	43	34	300	1,600	ND < 5.0	200	ND < 5.0	1,500	7,300	ND < 500
	Eighth Quarterly	Second Quarter	6/28/2004	14,000	720	72	64	370	600	ND < 50	90	ND < 50	ND < 500	7,000	ND < 500
	Ninth Quarterly	Third Quarter	9/30/2004	9,300	660	62	37	190	790	ND < 0.5	69	ND < 0.5	600	3,000	ND < 500
	Tenth Quarterly	Fourth Quarter	12/20/2004	7,980	528	64.8	82.8	628	1,280	ND < 10.0	124	ND < 100	ND < 1,000	5,910	250
	Eleventh Quarterly	First Quarter	4/5/2005	8,190	347	31.8	21.4	201	1,440	ND < 10.0	116	ND < 10	ND < 1,000	5,860	ND < 150
	Twelfth Quarterly	Second Quarter	6/22/2005	4,800	280	25.1	15.6	142	489	ND < 2.5	48.7	ND < 2.5	301	5,700	336
	Thirteenth Quarterly	Third Quarter	9/30/2005	6,910	279	46.8	35.9	244	108	ND < 2.5	15.6	ND < 2.5	ND < 250	3,050	147
	Fourteenth Quarterly	Fourth Quarter	12/18/2005	4,080	129	16.6	17.7	94.1	386	ND < 2.0	29.9	ND < 2.0	ND < 200	2,500	322
MW-4	Well Installation	Second Quarter	6/25/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	3.9	ND < 0.5	5.6	ND < 0.5	ND < 100	199	ND < 50
	First Quarterly	Third Quarter	9/16/2002	ND < 50	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	ND < 2	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	ND < 50	ND < 50
	Second Quarterly	Fourth Quarter	12/21/2002	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	4.8	ND < 50	3.8	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Third Quarterly	First Quarter	3/28/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	2.8	ND < 0.5	3.9	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fourth Quarterly	Second Quarter	6/27/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	0.7	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fifth Quarterly	Third Quarter	9/25/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Sixth Quarterly	Fourth Quarter	12/29/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Seventh Quarterly	First Quarter	3/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	97	ND < 500
	Eighth Quarterly	Second Quarter	6/28/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Ninth Quarterly	Third Quarter	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	67	ND < 500
	Tenth Quarterly	Fourth Quarter	12/20/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 5.0	ND < 5.0	ND < 50.0	ND < 50	52
	Eleventh Quarterly	First Quarter	4/5/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	86
	Twelfth Quarterly	Second Quarter	6/22/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	85
	Thirteenth Quarterly	Third Quarter	9/30/2005	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	53
	Fourteenth Quarterly	Fourth Quarter	12/18/2005	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	110

Table 4 (cont.)
Groundwater Analytical Results from Monitoring Wells
 McKinleyville 76
 2698 Central Avenue
 McKinleyville, California 95519

Sample Location	Sample Event	Annual Quarter	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
MW-5	Well Installation	Second Quarter	6/25/2002	168,000	21,300	22,500	13,900	2,580	571,000	ND < 0.5	689	ND < 0.5	ND < 100	2,580	ND < 50
	First Quarterly	Third Quarter	9/16/2002	246,000	36,900	37,000	14,100	4,500	540,000	ND < 0.5	2,530	ND < 0.5	----	10,200	ND < 50
	Second Quarterly	Fourth Quarter	12/21/2002	11,000	120	110	650	120	1,100	ND < 50	ND < 50	ND < 50	ND < 500	930	ND < 500
	Third Quarterly	First Quarter	3/28/2003	43,000	2,900	2,600	2,500	580	78,000	ND < 50	180	ND < 50	ND < 500	4,600	ND < 500
	Fourth Quarterly	Second Quarter	6/27/2003	230,000	25,000	27,000	13,300	2,700	280,000	ND < 500	1,500	ND < 500	ND < 5,000	9,600	ND < 500
	Fifth Quarterly	Third Quarter	9/25/2003	210,000	24,000	24,000	11,400	2,400	320,000	ND < 500	2,500	ND < 500	ND < 5,000	ND < 50	ND < 500
MW-6	Well Installation	Second Quarter	6/25/2002	11,900	2,370	0.8	5.4	0.8	22,600	ND < 0.5	274	ND < 0.5	ND < 100	295	ND < 50
	First Quarterly	Third Quarter	9/16/2002	44,700	11,500	1,470	357	802	61,600	ND < 0.5	715	ND < 0.5	ND < 100	729	ND < 50
	Second Quarterly	Fourth Quarter	12/21/2002	17,000	5,500	ND < 500	ND < 1,000	ND < 500	67,000	ND < 500	ND < 500	ND < 500	ND < 5,000	440	ND < 500
	Third Quarterly	First Quarter	3/28/2003	270	ND < 500	ND < 500	ND < 1,000	ND < 500	1,200	ND < 500	ND < 500	ND < 500	ND < 5,000	----	ND < 500
	Fourth Quarterly	Second Quarter	6/27/2003	ND < 50	5.4	0.6	ND < 1	ND < 0.5	80	ND < 0.5	11	ND < 0.5	ND < 5.0	ND < 50	ND < 500
	Fifth Quarterly	Third Quarter	9/25/2003	11,000	1,500	ND < 0.5	2.4	ND < 0.5	17,000	ND < 50	280	ND < 50	1,200	73	ND < 500
	Sixth Quarterly	Fourth Quarter	12/29/2003	5,100	1,200	ND < 500	ND < 1,000	ND < 500	29,000	ND < 500	ND < 500	ND < 500	ND < 5,000	ND < 50	ND < 500
	Seventh Quarterly	First Quarter	3/30/2004	1,600	100	ND < 5.0	ND < 10.0	ND < 5.0	1,500	ND < 5.0	36	ND < 5.0	440	120	ND < 500
	Eighth Quarterly	Second Quarter	6/28/2004	5,700	460	ND < 50	ND < 100	ND < 50	6,000	ND < 50	230	ND < 50	ND < 500	82	ND < 500
	Ninth Quarterly	Third Quarter	9/30/2004	37,000	4,400	ND < 50	ND < 150	ND < 50	59,000	ND < 50	370	ND < 50	4,600	450	ND < 500
	Tenth Quarterly	Fourth Quarter	12/20/2004	50,500	4,210	ND < 400	ND < 800	ND < 400	58,100	ND < 400	ND < 4,000	ND < 4,000	ND < 40,000	488	114
	Eleventh Quarterly	First Quarter	4/5/2005	12,200	842	ND < 40	ND < 80	ND < 40	10,000	ND < 40	123	ND < 40	ND < 4,000	238	208
	Twelfth Quarterly	Second Quarter	6/22/2005	4,250	914	ND < 10	ND < 20	ND < 10	3,460	ND < 10	119	ND < 10	ND < 1,000	100	110
	Thirteenth Quarterly	Third Quarter	9/30/2005	6,340	884	ND < 25.0	ND < 50.0	ND < 25.0	7,410	ND < 25.0	224	ND < 25.0	ND < 2,500	194	56
	Fourteenth Quarterly	Fourth Quarter	12/18/2005	4,890	731	ND < 25.0	ND < 50.0	ND < 25.0	6,360	ND < 25.0	194	ND < 25.0	ND < 2,500	259	140

Notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl Ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

No analytical results for methanol and ethanol were reported at or above the detection limits since the inception of the monitoring, therefore they have been omitted from this table to save space.

TBA: Tertiary butanol

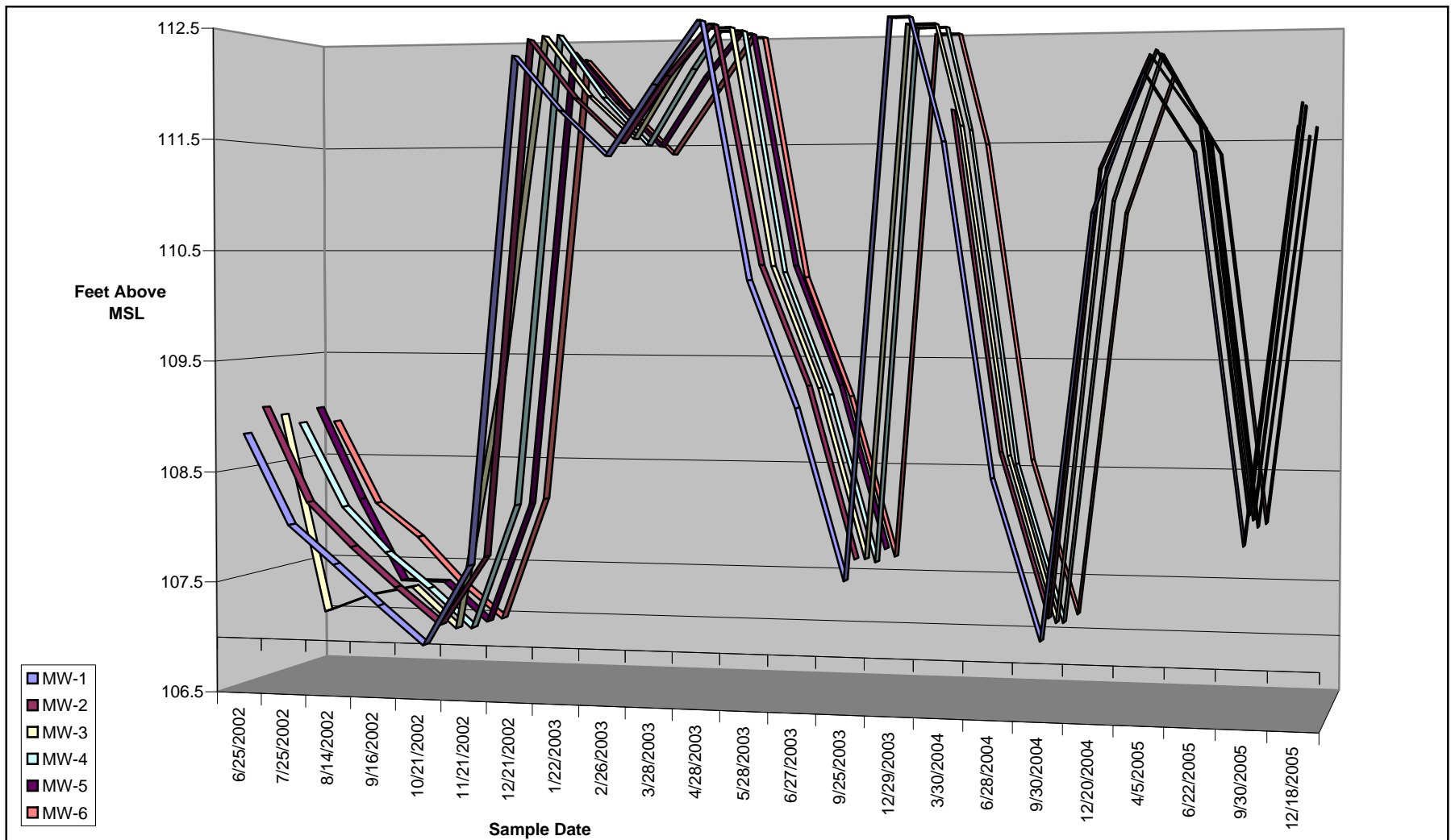
TPHd: Total petroleum hydrocarbons as diesel

TPHmo: Total petroleum hydrocarbons as motor oil

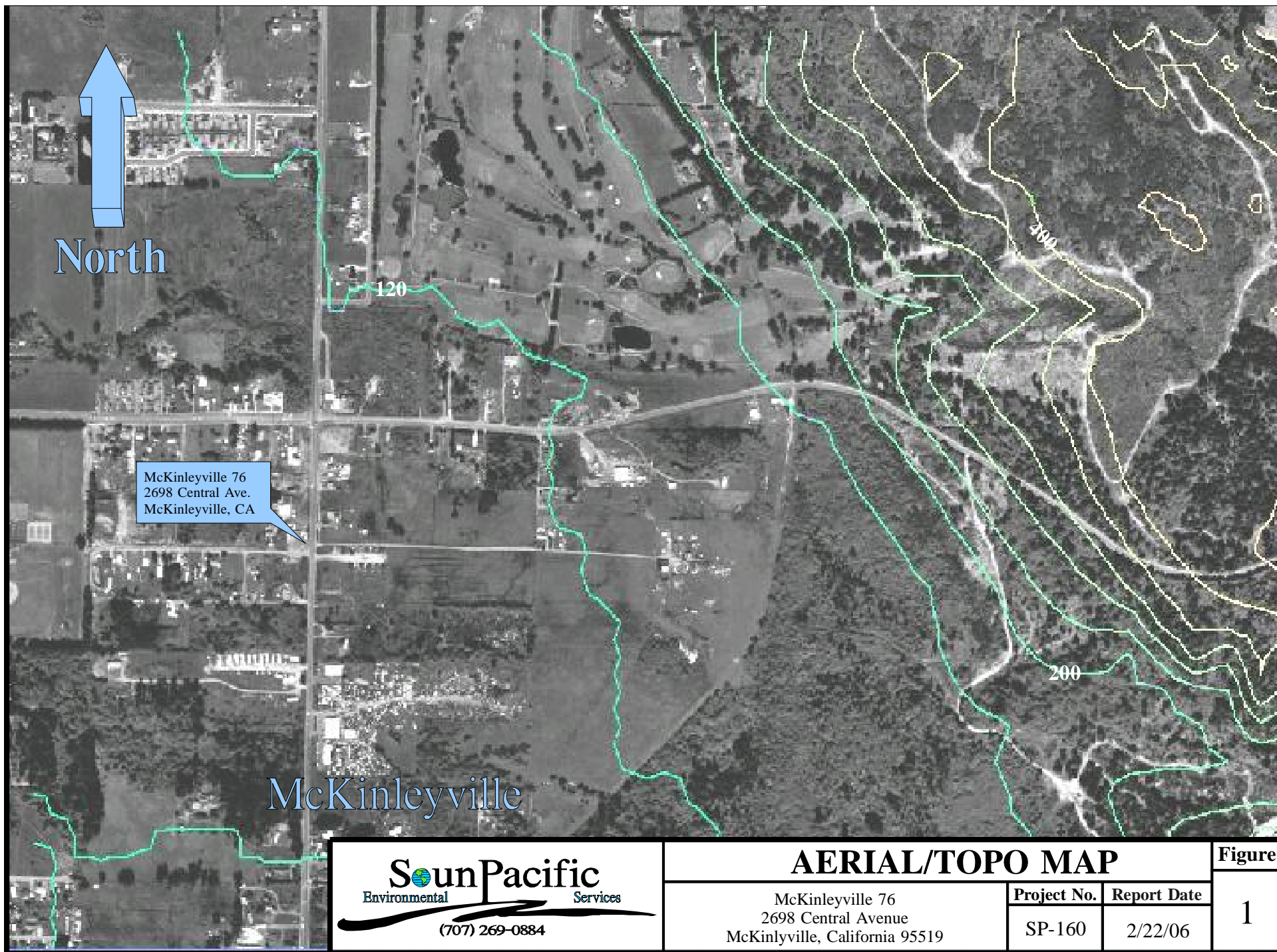
ppb: parts per billion = µg/l = .001 mg/l = 0.001 ppm.

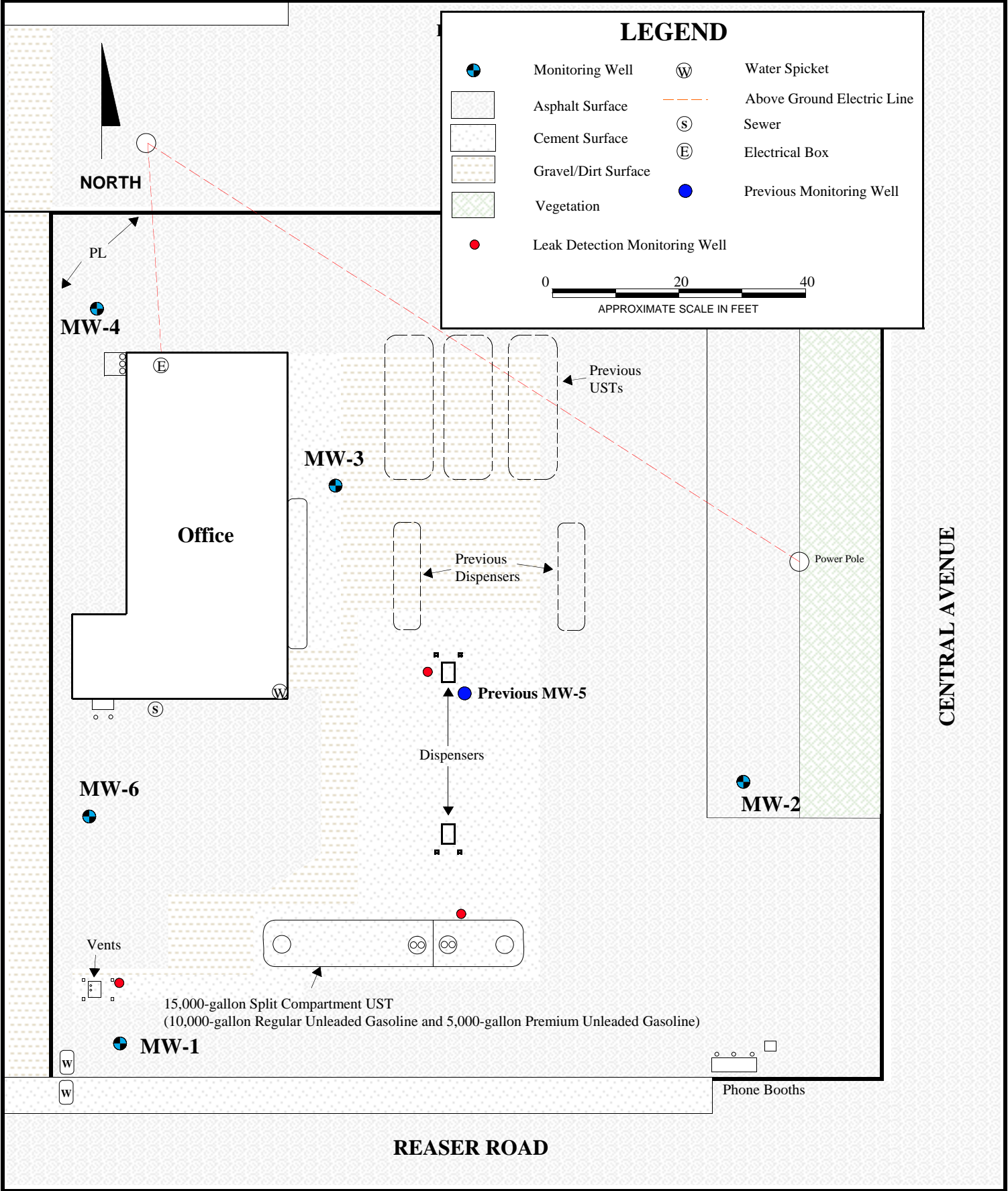
ND: Not detected at or below the method detection limit as shown.

Chart 1
Hydrograph
McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519



Figures





LEGEND

- Monitoring Well
- Soil Boring Drilled 4-6/02
- Soil Boring Drilled 10/00
- Soil Boring Drilled 3/97 (CGI)
- Soil Sample Taken 12/96 (CGI)
- Groundwater Sample 12/96 (CGI)
- Hand-Augered Borings (9/04)

0 30 60
APPROXIMATE SCALE IN FEET

GRAVEL DRIVEWAY

PARKING LOT

NORTH

CENTRAL AVENUE

Apartment Building

Apartment Building

Office

Previous 55-gallon Waste Oil UST (Removed 12/96)

Excavation Limits

Existing Cement Pad

15,000-gallon Gasoline UST Installation Pit

B-15

B-16

B-17

B-13

B-12

B-18

B-14

B-10

B-3

B-25

B-24

B-2

B-6

B-23

B-1

B-22

B-28

B-27

B-21

B-30

B-20

B-26

B-29

B-7

B-8

REASOR ROAD

B-11

SAMPLE LOCATION MAP

McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Project No.

SP-160

Report Date

2/22/06

Figure

3

Environmental

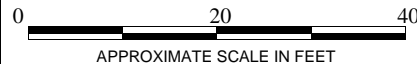
Services

PARKING LOT

LEGEND



Monitoring Well



NORTH

MW-4

Casing Elevation: 115.18
Depth to Water: 3.48
Elevation above MSL: 111.50

MW-3

Casing Elevation: 114.78
Depth to Water: 3.04
Elevation above MSL: 111.74

MW-2

Casing Elevation: 113.81
Depth to Water: 2.06
Elevation above MSL: 111.75

MW-6

Casing Elevation: 114.70
Depth to Water: 3.09
Elevation above MSL: 111.61

MW-1

Casing Elevation: 114.23
Depth to Water: 2.70
Elevation above MSL: 111.53

GW Flow Direction: SW
GW Gradient: 0.002 ft/ft

REASER ROAD

CENTRAL AVENUE

GROUNDWATER GRADIENT MAP DECEMBER 2005

Figure

McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Project No.

Report Date

4

SP-160

2/22/06

Environmental

Services

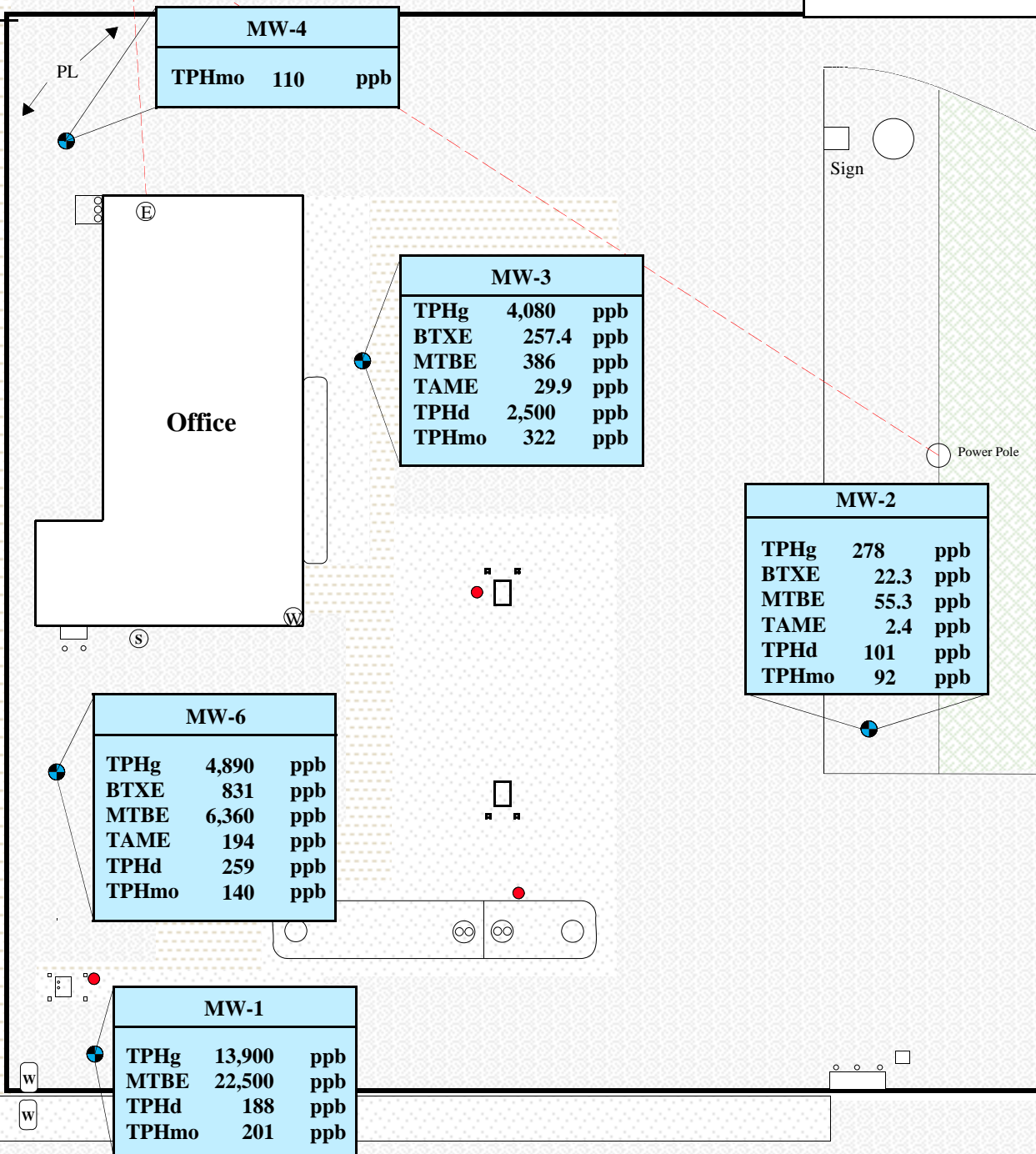
PARKING LOT

LEGEND

- Monitoring Well
- Leak Detection Monitoring Well

0 20 40
APPROXIMATE SCALE IN FEET

NORTH



GROUNDWATER ANALYTICAL RESULTS

Figure

McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Project No.

Report Date

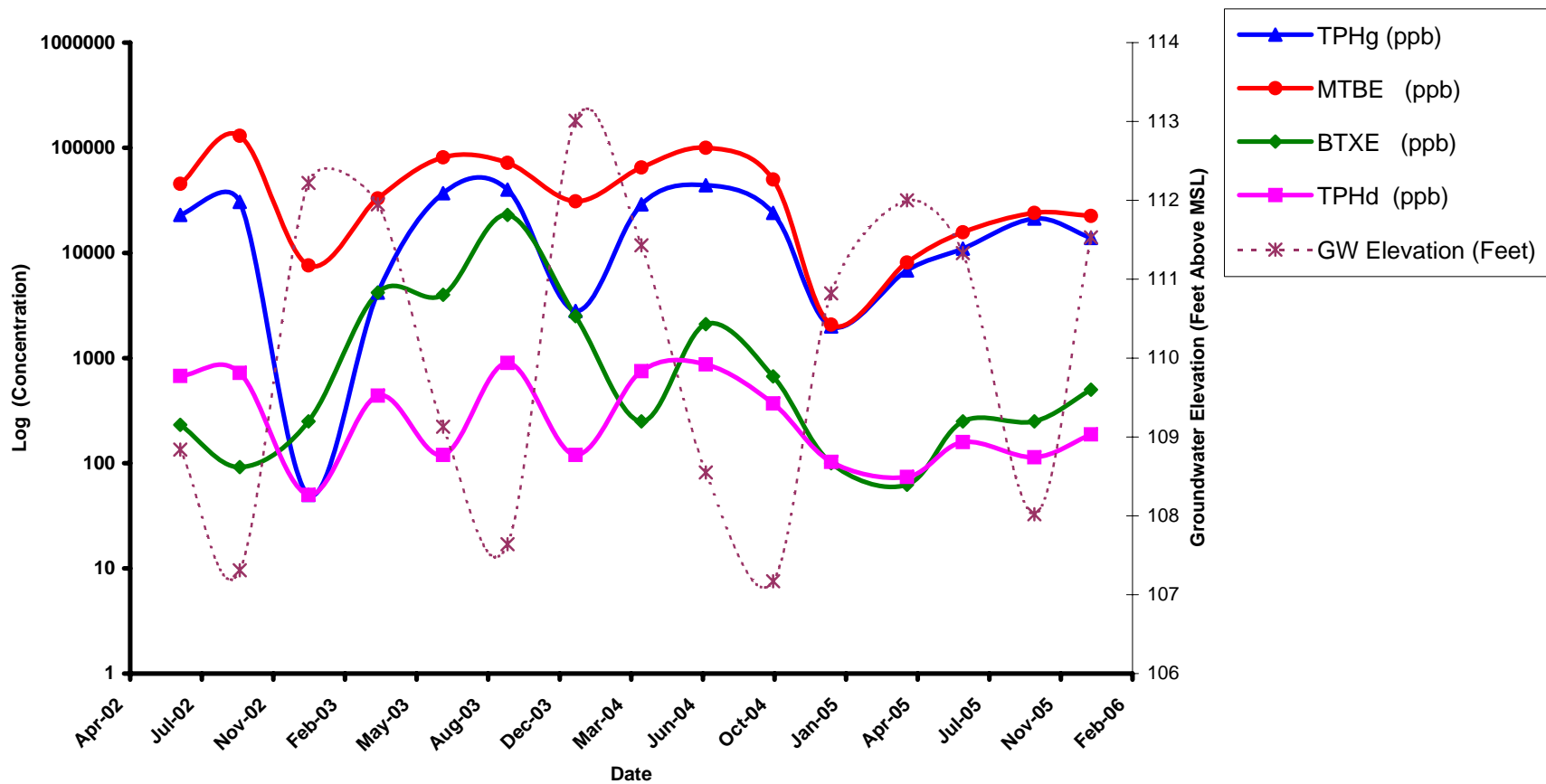
SP-160

2/22/06

5

Environmental

Services



MW-1 HYDROCARBON CONCENTRATIONS VS. TIME

McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Project No.

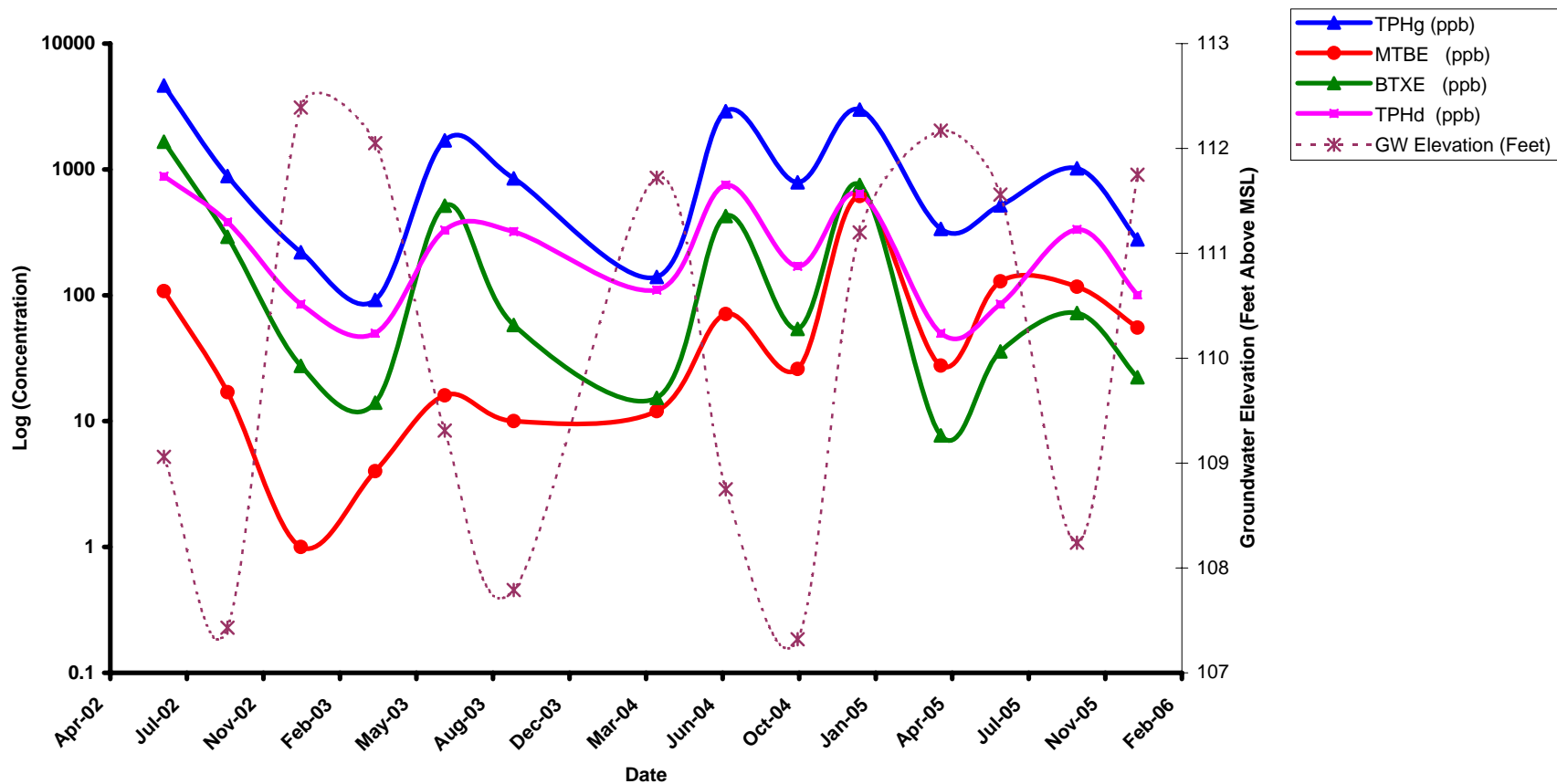
SP-160

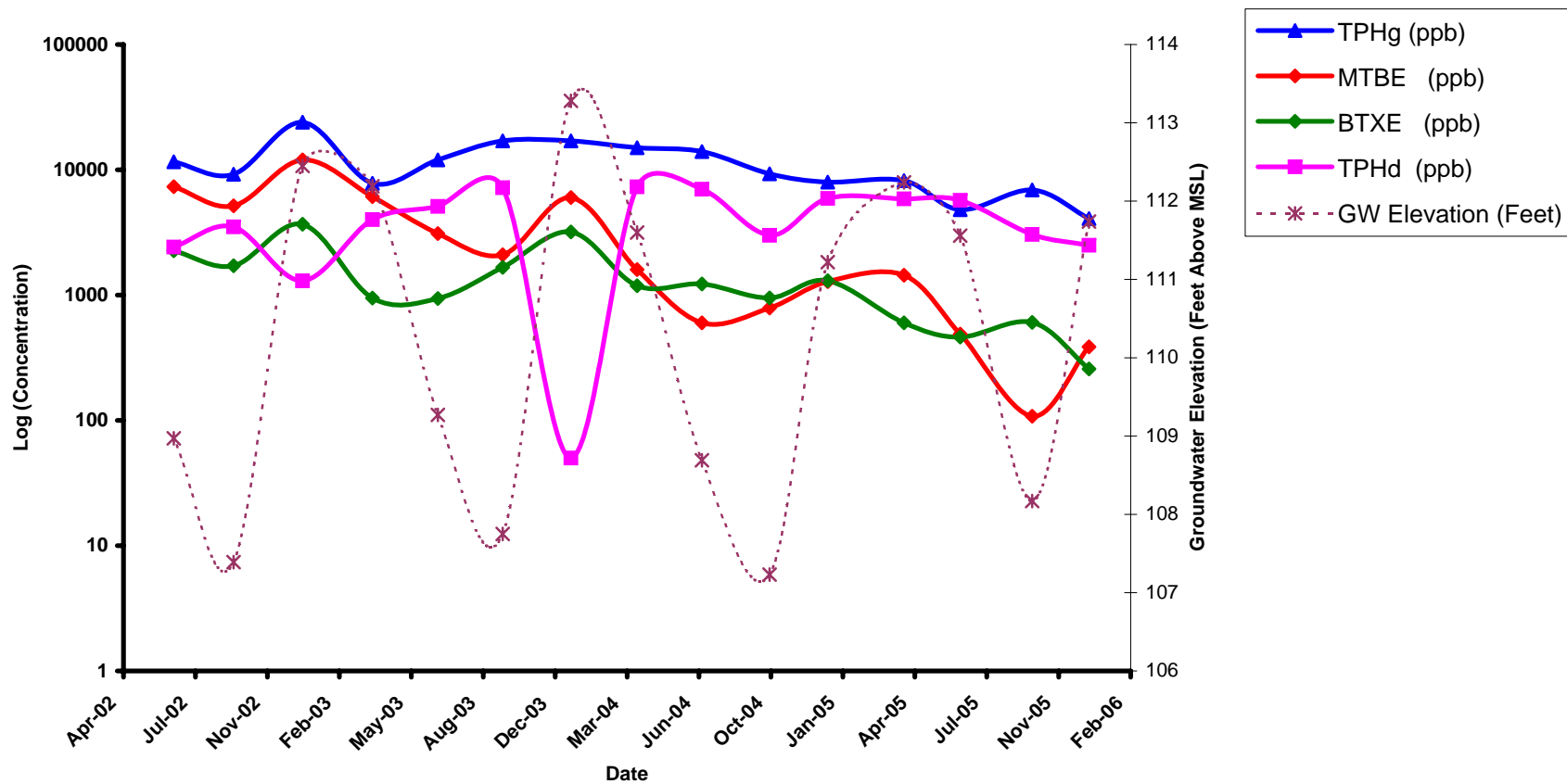
Date

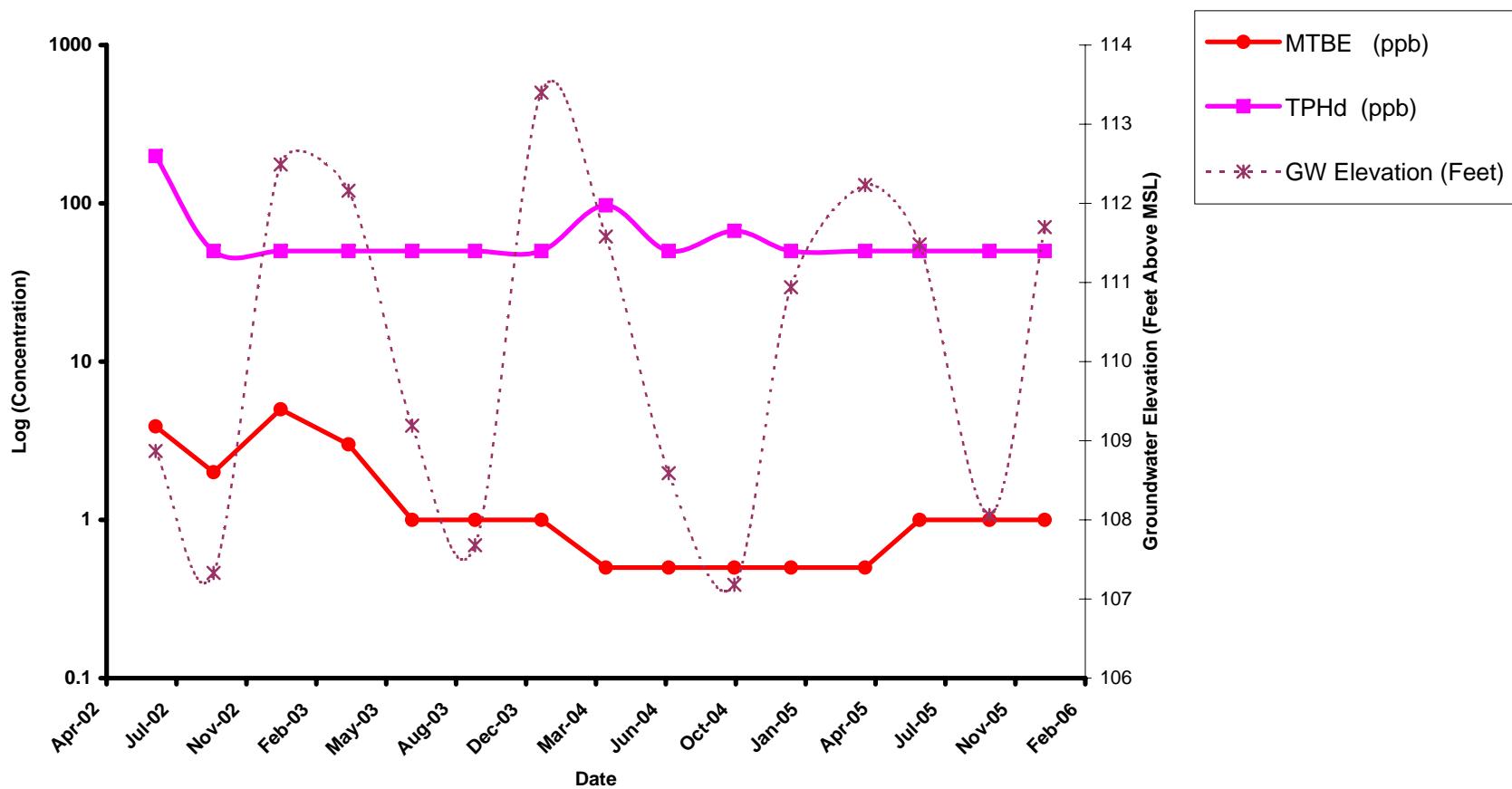
2/22/2006

Figure

6







MW-4 HYDROCARBON CONCENTRATIONS VS. TIME

McKinleyville 76
 2698 Central Avenue
 McKinleyville, California 95519

Project No.

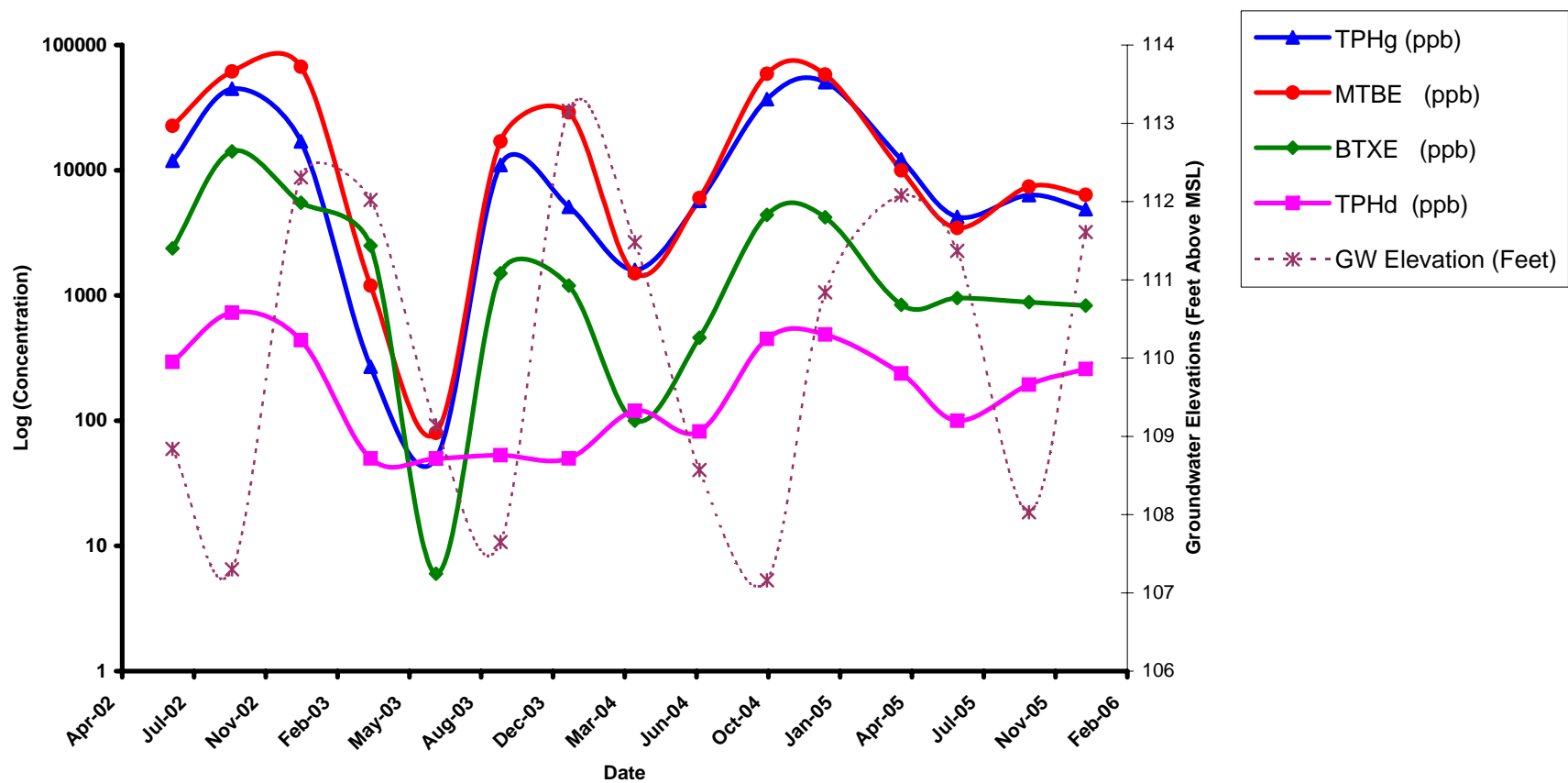
SP-160

Date

2/22/2006

Figure

9



MW-6 HYDROCARBON CONCENTRATIONS VS. TIME

McKinleyville 76
2698 Central Avenue
McKinleyville, California 95519

Project No.

SP-160

Date

2/14/2006

Figure

10

Appendices

Appendix A



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fax 530.243.7494

2218 Railroad Avenue

Redding, California 96001

January 13, 2006

Lab ID: 5120699

Andy Malone
SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549
RE: MCKINLEYVILLE 76 SP-160

Dear Andy Malone,

Enclosed are the analysis results for Work Order number 5120699. All analysis were performed under strict adherence to our established Quality Assurance Plan. Any abnormalities are listed in the qualifier section of this report.

If you have any questions regarding these results, please feel free to contact us at any time. We appreciate the opportunity to service your environmental testing needs.

Sincerely,

Ricky Jensen
For

Ricky Jensen

Ricky D. Jensen
Laboratory Director

California ELAP Certification Number 1677



www.basiclab.com

voice 530.243.7234 2218 Railroad Avenue
fax 530.243.7494 Redding, California 96001

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Andy Malone

Project: MCKINLEYVILLE 76 SP-160

Lab No: 5120699
Reported: 01/13/06
Phone: 707-269-0884
P.O. #

Volatile Organic Compounds

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-1 Water (5120699-01) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Gasoline	ug/l	13900	R-07		10000	EPA 8015/8260	12/22/05	12/22/05	B5L0539
Benzene	"	ND	R-07		100	"	"	"	"
Toluene	"	ND	R-07		100	"	"	"	"
Ethylbenzene	"	ND	R-07		100	"	"	"	"
Xylenes (total)	"	ND	R-07		200	"	"	"	"
Methyl tert-butyl ether	"	22500	R-01, R-07		1000	"	12/23/05	"	"
Di-isopropyl ether	"	ND	R-07		100	"	12/22/05	"	"
Tert-amyl methyl ether	"	ND	R-07		100	"	"	"	"
Ethyl tert-butyl ether	"	ND	R-07		100	"	"	"	"
Tert-butyl alcohol	"	ND	R-07		10000	"	"	"	"
Surrogate: 4-Bromofluorobenzene		99.4 %			43-155	"	"	"	"
MW-2 Water (5120699-02) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Gasoline	ug/l	278			50.0	EPA 8015/8260	12/22/05	12/22/05	B5L0539
Benzene	"	12.7			0.5	"	"	"	"
Toluene	"	0.9			0.5	"	"	"	"
Ethylbenzene	"	4.1			0.5	"	"	"	"
Xylenes (total)	"	4.6			1.0	"	"	"	"
Methyl tert-butyl ether	"	55.3			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	2.4			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		104 %			43-155	"	"	"	"
MW-3 Water (5120699-03) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Gasoline	ug/l	4080	R-07		200	EPA 8015/8260	12/22/05	12/22/05	B5L0539
Benzene	"	129	R-07		2.0	"	"	"	"
Toluene	"	16.6	R-07		2.0	"	"	"	"
Ethylbenzene	"	94.1	R-07		2.0	"	"	"	"
Xylenes (total)	"	17.7	R-07		4.0	"	"	"	"
Methyl tert-butyl ether	"	386	R-01, R-07		20.0	"	12/23/05	"	"
Di-isopropyl ether	"	ND	R-07		2.0	"	12/22/05	"	"
Tert-amyl methyl ether	"	29.9	R-07		2.0	"	"	"	"
Ethyl tert-butyl ether	"	ND	R-07		2.0	"	"	"	"
Tert-butyl alcohol	"	ND	R-07		200	"	"	"	"
Surrogate: 4-Bromofluorobenzene		106 %			43-155	"	"	"	"
MW-4 Water (5120699-04) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Gasoline	ug/l	ND			50.0	EPA 8015/8260	12/22/05	12/22/05	B5L0539
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	ND			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		99.4 %			43-155	"	"	"	"
MW-6 Water (5120699-05) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Gasoline	ug/l	4890	R-07		2500	EPA 8015/8260	12/22/05	12/22/05	B5L0539
Benzene	"	731	R-07		25.0	"	"	"	"
Toluene	"	ND	R-07		25.0	"	"	"	"

Ricky Jensen
Approved By

Basic Laboratory, Inc.
California D.O.H.S. Cert #1677



www.basiclab.com

voice 530.243.7234 2218 Railroad Avenue
fax 530.243.7494 Redding, California 96001

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549


Attention: Andy Malone

Project: MCKINLEYVILLE 76 SP-160

Lab No: 5120699
Reported: 01/13/06
Phone: 707-269-0884
P.O. #

Volatile Organic Compounds

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-6 Water (5120699-05) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Ethylbenzene	"	ND	R-07		25.0	"	"	12/22/05	"
Xylenes (total)	"	ND	R-07		50.0	"	"	"	"
Methyl tert-butyl ether	"	6360	R-01, R-07		200	"	12/23/05	"	"
Di-isopropyl ether	"	ND	R-07		25.0	"	12/22/05	"	"
Tert-amyl methyl ether	"	194	R-07		25.0	"	"	"	"
Ethyl tert-butyl ether	"	ND	R-07		25.0	"	"	"	"
Tert-butyl alcohol	"	ND	R-07		2500	"	"	"	"
Surrogate: 4-Bromofluorobenzene		98.6 %			43-155	"	"	"	"


Approved By
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California D.O.H.S. Cert #1677



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Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Andy Malone

Project: MCKINLEYVILLE 76 SP-160

Lab No: 5120699
Reported: 01/13/06
Phone: 707-269-0884
P.O. #

TPH Diesel & Motor Oil

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
MW-1 Water (5120699-01) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Diesel	ug/l	188	D-02, Z-01		50	EPA 8015 MOD	01/05/06	12/22/05	B5L0513
Motor Oil	"	201	D-02		50	"	"	"	"
Surrogate: Octacosane		105 %		50-150		"	"	"	"
MW-2 Water (5120699-02) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Diesel	ug/l	101	D-02, Z-01		50	EPA 8015 MOD	01/05/06	12/22/05	B5L0513
Motor Oil	"	92	D-02		50	"	"	"	"
Surrogate: Octacosane		124 %		50-150		"	"	"	"
MW-3 Water (5120699-03) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Diesel	ug/l	2500	D-02, Z-01		50	EPA 8015 MOD	01/05/06	12/22/05	B5L0513
Motor Oil	"	322	D-02		50	"	"	"	"
Surrogate: Octacosane		96.7 %		50-150		"	"	"	"
MW-4 Water (5120699-04) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Diesel	ug/l	ND	Z-01		50	EPA 8015 MOD	01/05/06	12/22/05	B5L0513
Motor Oil	"	110			50	"	"	"	"
Surrogate: Octacosane		107 %		50-150		"	"	"	"
MW-6 Water (5120699-05) Sampled:12/18/05 00:00 Received:12/21/05 16:00									
Diesel	ug/l	259	D-02, Z-01		50	EPA 8015 MOD	01/05/06	12/22/05	B5L0513
Motor Oil	"	140	D-02		50	"	"	"	"
Surrogate: Octacosane		99.1 %		50-150		"	"	"	"


Approved By

Basic Laboratory, Inc.
California D.O.H.S. Cert #1677



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Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549
Attention: Andy Malone
Project: MCKINLEYVILLE 76 SP-160

Lab No: 5120699
Reported: 01/13/06
Phone: 707-269-0884
P.O. #

Notes and Definitions

Z-01	The RPD result for the BS/BSD exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
R-07	The sample was diluted due to the presence of high levels of target analytes resulting in elevated reporting limits.
R-01	The Reporting Limit and Detection Limit for this analyte have been raised due to necessary sample dilution.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). The J flag is equivalent to the DNQ Estimated Concentration flag.
D-02	Hydrocarbon pattern present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
<	Less than reporting limit
≤	Less than or equal to reporting limit
>	Greater than reporting limit
≥	Greater than or equal to reporting limit
MDL	Method Detection Limit
RL/ML	Minimum Level of Quantitation
MCL/AL	Maximum Contaminant Level/Action Level
mg/kg	Results reported as wet weight
TTL	Total Threshold Limit Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leachate Procedure


Approved By

LAB #: 5120699
SAMPLE TYPE: Groundwater
OF SAMPLES: 5
PAGE 1 OF 1

LAB ID	REP:
	ID#:
	SYSTEM#:
	GLOBAL ID #: T0602300261
	QC = 1 2 3 4
	REMARKS

1	
2	
3	
4	
5	

CLIENT NAME: SounPacific						PROJECT NAME: Mckinleville 76							PROJECT #: SP-160				SAMPLE TYPE: Groundwater																	
ADDRESS: P.O. Box 13 Kneeland, CA 95549									REQUESTED COMP. DATE: Standard 1/9/05							STATE FORMS? <input type="checkbox"/>				# OF SAMPLES: 5														
									TURN AROUND TIME: STD <input checked="" type="checkbox"/> RUSH <input type="checkbox"/>							PAGE 1 OF 1																		
PROJECT MANAGER: Andy Malone									ANALYSIS REQUESTED							REP:																		
PHONE: 707-269-0884						FAX: 707-269-0699						E-MAIL: andy@soundpacific.com						ID#:																
INVOICE TO: SounPacific						PO#:						SYSTEM#:																						
SPECIAL MAIL <input type="checkbox"/>						E-MAIL <input checked="" type="checkbox"/>						FAX <input type="checkbox"/>						EDT <input type="checkbox"/>						GLOBAL ID #: Tobozoo261										
DATE		TIME		WATER		COMP		SOIL		SAMPLE DESCRIPTION		#	O	F	B	O	T	L	E	S	LAB ID		REMARKS											
12-18-05				X						MW-1		5	X	X	X	X	X	X	X		1													
				↓						MW-2		↓	↓	↓	↓	↓	↓	↓	↓		2													
										MW-3											3													
										MW-4											4													
										MW-6											5													
(VOCs)																																		
PRESERVED WITH: HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAce/NaOH <input type="checkbox"/> HCL <input checked="" type="checkbox"/> NaThio <input type="checkbox"/> OTHER _____																																		
SAMPLED BY: Tien-yu Tai										DATE/TIME: 12-18-05										RELINQUISHED BY: Tien-yu Tai										DATE/TIME: 12-19-05				
RECEIVED BY:										DATE/TIME:										RELINQUISHED BY:										DATE/TIME:				
RECEIVED BY: (SAMPLES UNVERIFIED)										DATE/TIME:										RELINQUISHED BY:										DATE/TIME:				
RECEIVED BY LAB: (VERIFIED) [Signature]										DATE/TIME: 12/21/05 16:00										SAMPLES SHIPPED VIA: UPS FEDEX POST BUS OTHER _____														

Appendix B



Standard Operating Procedures

Groundwater Level Measurements and Free Phase Hydrocarbon Measurements

All SounPacific staff and contractors shall adopt the following procedures any time that groundwater elevations are determined for the purposes of establishing groundwater gradient and direction, and prior to any sampling event.

Wells are to be tested for free phase hydrocarbons (free product) before the first development or sampling of any new well, and in any well that has historically contained free product.

Equipment Checklist

- ☐ Combination water level / free phase hydrocarbon indicator probe (probe)
- ☐ Gauging Data / Purge Calculations Sheet
- ☐ Pencil or Pen/sharpie
- ☐ Disposable Gloves
- ☐ Distilled Water and or know water source on site that is clean
- ☐ Alconox (powder) or Liquinox (liquid) non-phosphate cleaners—do not use soap!
- ☐ Buckets or Tubs for decontamination station
- ☐ Tools necessary to access wells
- ☐ Site Safety Plan
- ☐ This Standard Operating Procedure
- ☐ Notify Job site business that you will be arriving to conduct work.

Procedure

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Access and open all monitoring wells to be measured. Allow wells to equilibrate for approximately 15 minutes before taking any measurements.

3. Decontaminate probe with Alconox or Liquinox solution, and rinse with distilled water.
4. Determine the diameter of the well to be measured and indicate this on the Gauging Data / Purge Calculations Sheet.
5. Words of caution: Please be careful with water level and product meters probes are not attached with high strength material so please make sure to avoid catching the end on anything in the well and make sure not to wind reel to the point that it could pull on the probe. ***If product is suspect in a well, go to step 6, if no product is suspected go to step 7 below.***
6. **When product is present or suspected:** use the product level meter. Clip the static charge clamp to the side of the well casing. Then lower probe into the well through the product/water interface about one foot if possible. Then slowly raise the probe back up through the product/water interface layer and record the level as the tone changes from solid to broken-record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTP). Continue to raise the probe up through the product until the tone stops completely-record this level on the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW). Then go to step 8.
7. **When no product is present or suspected:** If no free product is present, record the depth of the water (to the nearest 0.01 foot) relative to the painted black mark on the top of the well casing. Leave the probe in the well just a hair above the water level to ensure the well as equilibrated. As the well rises, the tone will sound. Make sure no increase in water levels have occurred in over a ten-minute period. Water levels can lower as well as rise. Make sure you note when the level you keep lowering the probe to has remained stable for at least ten minutes. Once this has been accomplished, please record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW).
8. Turn off the probe, and use the probe to determine the depth to the bottom of the well relative to the top of the well casing. This is the depth to bottom measurement (DTB).
9. Decontaminate probe and tape by washing in an Alconox/Liquinox solution (***read directions on solution for ratio of water to cleanser***) and use the toothbrush provided to remove any foreign substance from the probe and tape. Then triple rinse probe and tape with clean water and then proceed to take measurements in the next well.
10. If sampling is to occur, proceed to implement SounPacific's Standard Operating Procedure for Monitoring Well Purging and Sampling. If no sampling is to be performed, close and secure all wells and caps.



Standard Operating Procedures

Monitoring Well Purging and Groundwater Sampling

All SounPacific employees and contractors shall adopt the following procedures any time that groundwater samples are to be taken from an existing groundwater monitoring well.

Prior to the implementation of these procedures, the groundwater level **MUST** be measured and the presence of free phase hydrocarbons determined in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

Equipment Checklist

- ☐ Gauging Data / Purge Calculations Sheet used for water level determination
- ☐ Chain of Custody Form
- ☐ pH/ Conductivity / Temperature meter
- ☐ Pencil or Pen
- ☐ Indelible Marker
- ☐ Calculator
- ☐ Disposable Gloves
- ☐ Distilled Water
- ☐ Alconox/liquinox liquid or powdered non-phosphate cleaner
- ☐ Buckets or Tubs for decontamination station
- ☐ Bottom-filling bailer or pumping device for purging
- ☐ Disposable bottom-filling bailer and emptying device for sampling
- ☐ String, twine or fishing line for bailers
- ☐ Sample containers appropriate for intended analytical method (check with lab)
- ☐ Sample labels
- ☐ Site Safety Plan
- ☐ Tools necessary to access wells
- ☐ Drum space on site adequate for sampling event

Procedure

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Measure groundwater levels and check for the presence of free product in accordance with the Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

Purging

3. Calculate and record the volume of standing water in each well using the information provided on the Gauging Data / Purge Calculations sheet.
 $(DTB-DTW) \times \text{Conversion Factor} = \text{Casing Volume}$.
4. The purge volume shall be at least three times and no more than seven times the volume of standing water (the casing volume).
5. Purge the well by bailing or pumping water from the well into a calibrated receptacle, such as a five gallon bucket or tub with markings to indicate one gallon increments. Collect purgeate in a 55 gallon labeled drum and store on site. Drum labels should include the date, contents, site number, and SounPacific's name and telephone number.
6. Take measurements of pH, conductivity, temperature, and visual observations to verify the stabilization of these parameters. At least five measurements of these parameters should be made throughout the purging process. The parameters shall be considered stabilized if successive measurements vary by less than 0.25 pH units, 10% of conductivity in μS , and 1°C (or 1.8°F). Continue purging until at least three times the casing volume has been removed, and the measured parameters have stabilized as indicated above. Do not exceed seven casing volumes.
7. Take a final depth to groundwater measurement and calculate the casing volume of the recharged well. Ideally, the casing volume should have recharged to at least 80% of the original measured casing volume before sampling commences. If due to slow recharge rates it is not feasible to wait for the well to fully recharge, then note this on the Gauging Data / Purge Calculation Sheet and proceed to sample following the procedure below.

Sampling

8. **After completing groundwater measurement, and checking for free product if necessary, in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, and after purging monitoring wells as described above, groundwater samples may be collected.**
9. Slowly lower a clean, previously unused disposable bailer into the well water approximately half of the bailer length, and allow the bailer to slowly fill.
10. Withdraw the full bailer from the monitoring well and utilize the included (clean and unused) bottom-emptying device to fill the necessary sample containers, and seal the container with the included PTFE (Teflon) lined cap.
11. When filling VOAs, fill the VOA completely full, with the meniscus rising above the rim of the bottle. Carefully cap the VOA and invert it and gently tap it to determine whether air bubbles are trapped inside. If the VOA contains air bubbles, refill the VOA and repeat this step.
12. All samples shall be labeled with the Sample ID, the Sample Date, and the Sample Location or Project Number. Use an indelible marker for writing on sample labels.
13. Record all pertinent sample data on the Chain of Custody.
14. Place samples in an ice chest cooled to 4°C with ice or "blue ice". Bottles should be wrapped in bubble wrap, and VOA's should be inserted in a foam VOA holder to protect against breakage. Samples are to be kept at 4°C until delivered to the laboratory. Any transference of sample custody shall be indicated on the Chain of Custody with the appropriate signatures as necessary.
15. Utilize clean, previously unused gloves, bailer and line, and bottom-emptying device for each well sampled.
16. When finished with all sampling, close and secure all monitoring wells.
17. Leave the site cleaner than when you arrived and drive safely.

Appendix C

GAUGING DATA/PURGE CALCULATIONS

Job Site: McKinleyville 7bJob No.: SP160Event: 14th QuarterlyDate: 12-18-05RECEIVED
12/21/05Soun Pacific
Environmental Services
(707) 269-0884

WELL NO.	DIA (in.)	DTB (ft.)	DTW (ft.)	ST (ft.)	CV (gal.)	PV (gal.)	SPL (ft.)	Bailer Loads	Notes
MW-1	2	12.5	2.7	9.8	1.5	4.5			Broken well cap, light turbid water
MW-2	2	12.66	2.06	10.6	1.7	5.1			Light turbid water.
MW-3	2	11.15	3.04	8.11	1.3	3.7			Strong HC Odor, Broken ^{well} cap, need fixed
MW-4	2	12.18	3.48	8.7	1.4	4.2			Slightly turbid water.
MW-6	2	12.88	3.09	9.19	1.47	4.5			11
									1 hazardous waste drum, 3 unlabeled
									drums w/ water (new), 1 drum has
									water & bailers, 1 drum has water & oil.

Explanation:

DIA = Well Diameter

DTB = Depth to Bottom

DTW = Depth to Water

ST = Saturated Thickness (DTB-DTW)

CV = Casing Volume (ST x cf)

PV = Purge Volume (standard 3 x CV,
well development 10 x CV)

SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf):

2 in. dia. well cf = 0.16 gal./ft.

4 in. dia. well cf = 0.65 gal./ft.

6 in. dia. well cf = 1.44 gal./ft.

Sampler:

Tien-Yu Tai

Well Gauging/Sampling Report

Sheet 2 of 5

Date: <u>12-18-05</u>		Project Name: <u>McKinleyville 76</u>		Project No: <u>SP160</u>		Well Number: <u>MW-2</u>	
Analyses Tested: <u>TAHg, BTxE, 5-Days, TTHd, TTHms</u>							
Sample Containers: <u>3 HIL Vials (40ml), 2 Amber Glass Bottles (1L)</u>							
Purge Technique:		<input checked="" type="checkbox"/> Bailor		<input type="checkbox"/> Pump			
Sounding Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
<u>1:20</u>	<u>2.06</u>		<u>No Sheen</u>				
<u>1:39</u>	<u>2.06</u>		<u>11</u>				
<u>End</u>							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (ms/cm)	DO (mg/L)	DO (%)	
<u>3:05 PM</u>	<u>0</u>	<u>6.98</u>	<u>56.71</u>	<u>0.219</u>	<u>1.50</u>	<u>14.5</u>	
<u>3:09</u>	<u>1.7</u>	<u>7.10</u>	<u>61.78</u>	<u>0.207</u>	<u>0.82</u>	<u>8.4</u>	
<u>3:13</u>	<u>3.4</u>	<u>7.18</u>	<u>61.85</u>	<u>0.186</u>	<u>0.63</u>	<u>6.5</u>	
<u>3:19</u>	<u>5.1</u>	<u>7.19</u>	<u>62.00</u>	<u>0.173</u>	<u>0.53</u>	<u>5.4</u>	
Field Scientist: <u>Tien-yu Tai</u>							

Well Gauging/Sampling Report

Sheet 3 of 5

Date: <u>12-18-05</u>		Project Name: <u>McKinleyville 76</u>		Project No: <u>SP160</u>		Well Number: <u>MW-3</u>	
Analyses Tested: <u>TPHg, BTEX, 5-Oxys, TPHd, TTHmo</u>							
Sample Containers: <u>3 HPL VOA's (40ml), 2 Amber Glass Bottles (1L)</u>							
Purge Technique:		<input checked="" type="checkbox"/> Bailor		<input type="checkbox"/> Pump			
Sounding Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes:				
1:23	3:05		No Sheen				
1:47	3:04						
	End						
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (ms/cm)	DO (mg/L)	DO (%)	
4:08pm	0	6.86	53.75	0.024	7.25	67.4	
4:11	1.3	6.80	57.90	0.089	4.08	40.0	
4:15	2.6	6.83	58.20	0.282	1.57	15.0	
4:19	3.9	6.91	58.73	0.374	0.91	9.0	
Field Scientist: <u>Tien-yu Tai</u>							

Well Gauging/Sampling Report

Sheet 4 of 5

Date: <u>12-18-05</u>		Project Name: <u>McKinleyville 76</u>		Project No: <u>SZ-160</u>		Well Number: <u>MW-4</u>	
Analyses Tested: <u>TPHg, BTXE, S-Oxys, TAlk, TAlknd</u>							
Sample Containers: <u>3 HIR Vials (40 ml), 2 Amber Glass Bottles (1L)</u>							
Purge Technique:		<input checked="" type="checkbox"/> Bailor		<input type="checkbox"/> Pump			
Sounding Used:		<input type="checkbox"/> Water Meter		<input checked="" type="checkbox"/> Interface Meter			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
<u>1:26</u>	<u>3:48</u>		<u>Shreen</u>				
<u>1:52</u>	<u>3:48</u>						
<u>End</u>							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (ms/cm)	DO (mg/L)	DO (%)	
<u>3:39 PM</u>	<u>0</u>	<u>6.58</u>	<u>55.75</u>	<u>0.148</u>	<u>4.88</u>	<u>46.5</u>	
<u>3:44</u>	<u>1.4</u>	<u>6.60</u>	<u>57.87</u>	<u>0.147</u>	<u>4.27</u>	<u>41.8</u>	
<u>3:47</u>	<u>2.8</u>	<u>6.55</u>	<u>58.84</u>	<u>0.148</u>	<u>3.88</u>	<u>38.2</u>	
<u>3:53</u>	<u>4.2</u>	<u>6.49</u>	<u>58.61</u>	<u>0.152</u>	<u>3.41</u>	<u>33.7</u>	
Field Scientist: <u>Tien-yu Tai</u>							

Well Gauging/Sampling Report

Sheet 5 of 5

Date: <u>12-18-05</u>		Project Name: <u>McKinleyville 76</u>		Project No: <u>SP-160</u>		Well Number: <u>MW-6</u>	
Analyses Tested: <u>TPHg, BTEX, 5-Oxys, TPHd, TPHmo</u>							
Sample Containers: _____							
Purge Technique:		<input checked="" type="checkbox"/> Bailor		<input type="checkbox"/> Pump			
Sonder Used:		<input type="checkbox"/> Water Motor		<input checked="" type="checkbox"/> Interface Motor			
Water & Free Product Levels							
Time	Depth to Water	Depth to Product	Notes				
<u>1:18P</u>	<u>3.1</u>		<u>Sheen</u>				
<u>1:35P</u>	<u>3.09</u>						
<u>End</u>							
Field Measurements							
Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (µm/cm)	DO (mg/L)	DO (%)	
<u>2:36pm</u>	<u>0</u>	<u>6.33</u>	<u>57.32</u>	<u>0.288</u>	<u>1.54</u>	<u>15.0</u>	
<u>2:41</u>	<u>1.5</u>	<u>6.43</u>	<u>58.40</u>	<u>0.291</u>	<u>1.66</u>	<u>16.4</u>	
<u>2:46</u>	<u>3</u>	<u>6.58</u>	<u>59.42</u>	<u>0.332</u>	<u>1.25</u>	<u>12.5</u>	
<u>2:51</u>	<u>4.5</u>	<u>6.54</u>	<u>59.96</u>	<u>0.329</u>	<u>1.18</u>	<u>11.8</u>	
Field Scientist: <u>Tien-yu Tai</u>							